

Statement of Basis

For the Planned Issuance of a
Revised Clean Air Act Permit Program (CAAPP) Permit
Through Significant Modification and Reopening for:

**Electric Energy, Inc.
Joppa Power Station**

Illinois EPA Source ID No.: 127855AAC
Federal ORIS* Code for the Source: 887
CAAPP Permit No.: 95090120

Permitting Authority:
Illinois Environmental Protection Agency
Bureau of Air, Permit Section

November 22, 2016

* Office of Regulatory Information Systems (ORIS)

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Statement of Basis for Planned Changes to CAAPP Permit No. 95090120
And Planned Issuance of a Revised Acid Rain Permit

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PREFACE

The purpose of this Statement of Basis is to discuss the development and legal basis for revisions to the Clean Air Act Permit Program (CAAPP)¹ permit for the Joppa Power Station (Joppa) that are now planned. Through both a significant modification and reopening, certain revisions to the CAAPP permit for this source are planned to resolve the pending appeal before the Illinois Pollution Control Board and to address new applicable requirements under the Clean Air Act that took effect after issuance of the initial permit in 2005. The revisions to the CAAPP permit that are now planned are intended to lead to the effectiveness of a CAAPP permit for this sources that addresses all applicable requirements. In addition, the Illinois EPA is planning to conditionally approve the Compliance Assurance Monitoring (CAM) Plan for the particulate matter emissions of the coal-fired boilers at this power station.

A Statement of Basis is a document that the Illinois EPA must prepare as part of the public comment period for the planned CAAPP permit of a renewal, significant modification and/or reopening of a CAAPP permit. The statement of basis is intended to aid the public in understanding the relevant facts and legal basis of permitting actions regarding planned CAAPP permits.² In this instance, this Statement of Basis addresses the revisions to the CAAPP permit for the Joppa Power Station that are planned through significant modification and reopening of this permit.

For convenience, this Statement of Basis also addresses the planned issuance of a revised Acid Rain Program Permit for the six coal-fired boilers at Joppa. This revised permit would take the place of the Acid Rain Permit that is Attachment 5 of the current CAAPP permit for this source.

This Statement of Basis is only explanatory in nature and is not enforceable. The Statement of Basis also does not provide a shield from enforcement actions or responsibility to comply with existing or future applicable regulations. Nor does this Statement of Basis constitute a defense to a violation of the federal Clean Air Act, the Environmental Protection Act (Act) or implementing regulations thereunder.

¹ The Clean Air Act Permit Program (CAAPP) is Illinois' operating permit program for sources of emissions pursuant to Title V of the federal Clean Air Act.

² The Illinois EPA must prepare Statements of Basis pursuant to Section 39.5(8)(b) of Illinois' Environmental Protection Act (Act), 502(a) of the Clean Air Act and 40 CFR 70.7(a)(5). Along with the draft of the planned revised permit prepared for public comment, "The Illinois EPA must prepare ... a statement that sets forth the legal and factual basis for the Draft CAAPP permit conditions, including references to the applicable statutory or regulatory provisions." The Illinois EPA must also provide a copy of this statement to any person who requests it.

INTRODUCTION

The Joppa Power Station (Joppa) is a coal power plant with six coal-fired generating units. The initial CAAPP³ permit for the Joppa Power Station was issued by the Illinois EPA in September 2005. The permit addressed the applicable emission standards and requirements that existed at the time the permit was issued.⁴ In a subsequent permit appeal to the Illinois Pollution Control Board, the applicability of certain legal requirements and the imposition of certain requirements for emission testing, monitoring recordkeeping and reporting in the CAAPP permit were challenged. As a consequence of the Illinois administrative review process, in the years since the filing of the appeal, the initial permit has been stayed in its entirety. The presence of the stay prevented the initial permit from becoming effective.

This Statement of Basis supports the revisions to the CAAPP permit for the Joppa Power Station that are now planned by the Illinois EPA and for which a public comment period is required before any such revisions are made. Chapter 1 of this Statement of Basis provides historical background to the planned permitting action. Chapter 2 provides the factual basis for these planned permit actions. Chapter 3 discusses significant modifications to certain elements in the CAAPP permit that would resolve the appeal.⁵ Chapter 4 provides a narrative discussion for the specific changes that are planned to the CAAPP permit in the reopening proceeding so that the permit would address all

³ The Clean Air Act Permit Program (CAAPP) is the operating permit program established in Illinois for stationary sources of emissions that is required by Title V of the federal Clean Air Act (CAA). Title V permits are a means of assembling and setting forth the various air pollution control requirements established under the CAA for major sources of emissions and certain other sources in particular categories. Illinois' CAAPP has been approved by USEPA as meeting the requirements for a Title V permit program. The CAAPP is administered by the Illinois EPA in conjunction with other state permitting programs for stationary sources of emissions. CAAPP permits contain conditions identifying the federal and state emission control requirements that apply to the various emission units at sources. They also contain detailed conditions establishing "monitoring", including operating practices, emission testing, emissions monitoring, operational monitoring, recordkeeping and reporting, that subject sources must implement to confirm they are operating in compliance with applicable emission control requirements. The statutory authority for Illinois's CAAPP is found at Section 39.5 of the Environmental Protection Act (Act). The CAAPP was given final full approval by USEPA on December 4, 2001 (66 FR 62946).

⁴ Joppa is subject to a variety of federal and state emission standards and emission control requirements, which are the legal basis for certain conditions in this CAAPP permit that limit emissions. Certain other requirements have their origin in construction permits issued for new or modified emission units at the source. The CAAPP itself identifies the legal basis for additional requirements such as periodic monitoring, reporting, and recordkeeping. The specific statutory and regulatory provisions that are the legal basis for the conditions in the CAAPP permit for this source are provided in the permit, as the origin and authority of conditions are also specified and referenced in the conditions of the permit. Conditions that have their origin in a construction permit are also identified. In this regard, the Illinois EPA's practice in CAAPP permits is to identify requirements that are carried over from an earlier construction permit into a new or renewed CAAPP Permit as "TI" conditions (i.e., Title I conditions). Because the underlying authority for provisions in construction permits comes from Title I of the CAA and their initial establishment in Title I Permits, the effectiveness of TI Conditions derives from Title I of the CAA rather than being linked to Title V of the CAA.

⁵ Chapter 3 does not address the minor modifications and administrative amendments that are also planned to the initial CAAPP permit for Joppa to resolve the appeal. These planned changes to the initial CAAPP permit are discussed in Section 1.3 and Attachments 1 and 2 of this Statement of Basis. The CAAPP's procedures for minor modifications and administrative amendments to CAAPP permits do not provide for a public comment period before such changes may be made to permits.

applicable requirements under the Clean Air Act. Chapter 5 contains a discussion of the CAM related conditions for Joppa. Chapter 6 contains a discussion of the revised Acid Rain Program permit. Chapter 7 provides general background on the emission units at the Joppa Power Station and requirements under the draft CAAPP permit for this permit action.

This Statement of Basis also addresses the planned issuance of a revised Acid Rain Program Permit for the coal-fired generating units at Joppa. This revised Acid Rain Program Permit, which would take the place of the permit that is attached to the initial CAAPP permit for Joppa, is addressed in Chapter 1.4 of this Statement of Basis.

CHAPTER 1 - HISTORICAL AND LEGAL BACKGROUND TO THE PLANNED ACTION

1.1 Historical Background

Electric Energy, Inc. (the "Permittee") owns a coal-fired electric power plant known as the Joppa Power Station ("Joppa"). This power plant is located at 2100 Portland Road, Joppa, Illinois. In addition to six coal boilers, this plant has ancillary equipment and operations, including coal handling, coal processing, fly ash handling and a gasoline storage tank.

The Permittee filed an application with the Illinois EPA for an initial CAAPP permit on September 8, 1995. The application was assigned Application No. 95090120. Following a public comment period with opportunity for comments from the public and review of a proposed CAAPP permit by USEPA, the Illinois EPA issued an initial CAAPP permit for Joppa on September 29, 2005.

On November 3, 2005, the Permittee petitioned Illinois' Pollution Control Board (Board) for review of the CAAPP permit issued by the Illinois EPA for Joppa. In particular, the Permittee challenged the inclusion of certain specific terms and conditions in this permit, as identified in the petition. The Permittee requested that the Board reverse and remand the permit to the Illinois EPA specifically for the purpose of removing said conditions or revising the permit as requested in the petition. The Permittee further requested that the Board recognize that the "issued" CAAPP Permit was not final and effective, pending a final decision from the Board, with issuance of an order staying the permit as a whole. On November 17, 2005, the Board accepted the Permittee's appeal petition, and on February 16, 2006, the Board recognized that the issued CAAPP permit was stayed in its entirety as a matter of law.

The Illinois EPA and Electric Energy, Inc. have been working to settle the appeal of the CAAPP permit. As discussed below, notice of the planned permit action and this accompanying document marks the first step to resolving the permit appeal and ultimately providing for permit effectiveness of a CAAPP permit for this source. In conjunction with the negotiations for settling the appeal of the CAAPP permit, the Illinois EPA is implementing a formal reopening of this permit under the CAAPP's procedures for reopening, as authorized by Section 39.5(15)(a)(i) of the Environmental Protection Act (Act). The purpose of this reopening proceeding is to address additional requirements to the CAAPP permit, i.e., requirements under the Clean Air Act that have become applicable to Joppa since the original permit issuance in 2005. For the coal-fired boilers, the following regulations have been identified as needing to be addressed in the reopening proceeding: the Illinois Mercury Rule (35 IAC Part 225); the USEPA's Mercury and Air Toxics Standards (MATS), 40 CFR 63 Subpart UUUUU; and the USEPA's Cross-State Air Pollution Rule (CSAPR), 40 CFR Part 97 Subparts AAAAA,BBBBB and CCCCC. The applicable requirements set by construction permits issued since 2005 for projects at Joppa will also be addressed in the reopening proceeding. The Illinois EPA has prepared a draft of a revised CAAPP permit that reflects changes to the permit that would be made as a result of settlement discussions and also required under a Reopening proceeding so the CAAPP permit is up to date.

1.2 The Current CAAPP Permit Actions

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The Illinois EPA has prepared a draft of the revisions to the CAAPP permit that are now planned as part of the significant modification and reopening of the initial CAAPP permit. The draft of the revised permit includes the collection of all planned changes to the CAAPP permit resulting from the negotiated settlement of the permit appeal and the reopening, as well as certain other administrative and minor changes to the permit that are planned. Separate draft permits have not been prepared for the different revisions based on the legal authority that would be used to make those revisions. As provided by Sections 39.5(14)(c) and 39.5(15)(c) of the Act, proceedings for a significant modification and reopening of a permit must adhere to the "same procedures" that apply to initial issuance of a CAAPP permit. These procedures include the preparation of a planned CAAPP permit and accompanying Statement of Basis, and a public comment period, followed by opportunity for review by USEPA. In addition, both significant modifications and reopenings of CAAPP permits do not provide for comprehensive reviews of the permits, as would occur for an initial or renewed CAAPP permits. Instead, they only affect the parts of the permits addressed by the significant modification or reopening.

The planned revisions to the permit would primarily involve the applicability of certain legal requirements and changes to requirements for periodic monitoring. As provided by the Act, the CAAPP's procedures for significant modification must be used "for applications requesting significant modifications and for those applications that do not qualify as either minor modifications or as administrative permit amendments". As relevant here, a permit modification that would entail a "significant change in existing monitoring" or a "relaxation of reporting or recordkeeping requirements" is considered "significant". Sections 39.5(14)(c)(i) and (ii) of the Act.

In addition to appeal resolution, and as a consequence of implementing a significant modification to the CAAPP permit, the Illinois EPA is addressing the USEPA's Compliance Assurance Monitoring Rule (CAM Rule or CAM), 40 CFR Part 64. In this instance, the applicability of the CAM rule is not being triggered as a result of CAAPP's procedures for permit revision but, rather, by an independent requirement of the CAM rule. CFR 64.5(a)(2) provides that CAM becomes applicable when a large pollutant-specific emission unit would be the subject of a significant permit modification. As CAM would now become applicable for the coal boilers at Joppa for emissions of particulate matter (PM), Electric Energy, Inc. has submitted a CAM plan to the Illinois EPA for these units. In the current permitting action, the Illinois EPA is proposing to conditionally approve this CAM plan. (See Section 3.2 of this Statement of Basis for a further discussion of this CAM plan.)

It is Illinois EPA's preliminary determination that this planned permit action meets the standards for issuance of a revised CAAPP permit as set forth in Section 39.5(10)(a) of the Act. (See Section 1.7 of this document). The Illinois EPA has therefore initiated the process for both a Significant Modification and Reopening of the CAAPP Permit. As both a planned significant modification and reopening of a CAAPP permit, before a revised permit may be issued, a public comment period is required on a draft of the revised permit and USEPA must then be provided with an opportunity to review a proposed

version of the permit that reflects consideration of public comments by the Illinois EPA, as provided for by Sections 39.5(8)(a) and (9) of the Act.

1.3 Parallel Permitting Actions

In addition to the planned revisions to the CAAPP permit for Joppa pursuant to this permitting action, to resolve the pending permit appeal, the Illinois EPA is planning to make certain other revisions to the current CAAPP permit through the procedures for minor modifications and administrative amendment.

The additional revisions that will be addressed using the procedures for minor modification involve a variety of changes, including, among other things, those that do not cause significant changes to existing monitoring, reporting or recordkeeping, as provided for by Section 39.5(14)(a)(i)(B) of the Act. For permit revisions meeting the criteria for minor modification, the Illinois EPA is required to review the revisions using the CAAPP's procedures for minor modifications. The revisions that will be made using the minor modification process are described in Attachment 1 of this Statement of Basis. The CAAPP does not provide for public participation on planned minor modifications of CAAPP permits. USEPA will be afforded a 45-day review period to comment on the proposed modifications, as provided for by Section 39.5(14)(a)(v) of the Act.

For permit revisions meeting the criteria for administrative amendment, the Illinois EPA is required to address the revisions using the procedures for administrative amendment of CAAPP permits. The revisions that will be made to the CAAPP permit using the procedures for administrative amendment are described in Attachment 2 of this Statement of Basis. The CAAPP does not provide for public participation on planned administrative amendments. A copy of the amended permit will be submitted to the USEPA following revision, as required by Section 39.5(13)(b) of the Act.

1.4 Issuance of a Revised Acid Rain Program Permit for the Joppa Station

Under the federal Acid Rain Program, the Permittee has applied for a revised Acid Rain Permit for Joppa. The purpose of the Acid Rain Program, which was established by Title IV of the Clean Air Act, is to achieve significant reductions in emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) from fossil-fuel fired electrical generating units as related to the contribution of these emissions to acid rain. To achieve this objective for coal-fired power plants, the program employs a market-based approach to reduce SO₂ emissions and traditional emission standards for NO_x emissions.

The Illinois EPA has determined that it is appropriate to issue a revised Acid Rain Program Permit for Joppa, as discussed further in Chapter 6 of this document. The issuance of this revised Acid Rain Permit must also be subject to public participation and review by any affected States and then undergo review by USEPA. In addition, the revised Acid Rain Permit would take the place of the Acid Rain Permit that is included as Attachment 5 of the current CAAPP permit for Joppa, also contributing to bringing the CAAPP Permit for Joppa up to date. Accordingly, the Illinois EPA is processing the draft of this revised Acid Rain Program Permit at the same time as other planned revisions to the CAAPP permit.

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CHAPTER 2 - FACTUAL BASIS FOR THE PLANNED PERMIT ACTION**2.1 Description of the Source**

At the Joppa Power Station, six coal-fired boilers are operated to generate electrical power. The boilers are identical in size and type, with pairs of boilers sharing stacks. This plant is located at 2100 Portland Road in Joppa. The area in which this plant is located has not been identified as posing a potential concern for consideration of Environmental Justice.

SIC Code: 4911

Location: Massac County

The revised CAAPP permit for Joppa planned by the Illinois EPA would address the following emission units and operations at the plant, in addition to the insignificant activities that are present at this plant.

Emission Unit(s)	Description
Boiler 1	Combustion Engineering Boiler
Boiler 2	Combustion Engineering Boiler
Boiler 3	Combustion Engineering Boiler
Boiler 4	Combustion Engineering Boiler
Boiler 5	Combustion Engineering Boiler
Boiler 6	Combustion Engineering Boiler
Coal Handling Equipment	Coal Receiving, Transfer and Storage Operations
Coal Processing Equipment	Coal Crushing Operations
Gasoline Storage Tank	Small Gasoline Storage Tank
Fly Ash Handling Equipment	Fly Ash Handling and Storage Operations

2.2 Ambient Air Quality Status for the Area

Joppa is located in an area that is currently designated attainment or unclassifiable for the National Ambient Air Quality Standards for all criteria pollutants, including nitrogen dioxide (NO₂), particulate matter_{2.5} (PM_{2.5}), particulate matter₁₀ (PM₁₀),⁶ sulfur dioxide (SO₂), carbon monoxide (CO), ozone and lead. (See 40 CFR 81.314, Attainment Status Designations: Illinois)

2.3 Major Source Status

Joppa requires a CAAPP permit because it is considered a major source for emissions of the following regulated pollutants: nitrogen oxides (NO_x),

⁶ PM_{2.5} and PM₁₀ are particles with aerodynamic diameters equal to or less than 2.5 and 10 microns, respectively.

volatile organic material (VOM), PM₁₀, PM_{2.5}, SO₂, CO and hazardous air pollutants (HAP). A major source of emissions is required to have a CAAPP permit by Section 39.5(2)(a)(i) of the Act.⁷

This plant also requires a CAAPP Permit as an “affected source” for the purposes of Acid Deposition Control, Title IV of the Clean Air Act, as provided by Section 39.5(2)(a)(iii) of the Act.

The actual annual emissions of regulated pollutants from Joppa, as reported by the source in its Annual Emission Reports submitted to the Illinois EPA, are provided below:

Pollutant	Reported Emissions (tons/year)		
	2015	2014	2013
CO	771	1,081	1,043
NO _x	2,966	4,024	4,042
PM	1,060	1,424	1,381
SO ₂	13,230	18,281	16,542
VOM	108	151	146
CO ₂	5,638,874	7,908,474	7,638,351
Mercury	0.021	0.083	0.065
Hydrogen Chloride (HCl)	18.84	-	-
Hydrogen Fluoride (HF)	23.60	-	-

2.4 Fee Schedule

Emission limits are not set for this source for the purpose of CAAPP fees. This is because Electric Energy must pay the maximum fee pursuant to Section 39.5(18)(a)(ii)(A) of the Act.

2.5 Construction Permits

The construction permits listed below, which were issued since October 2005, were reviewed during the development of the planned revised CAAPP permit for Joppa. Applicable requirements that relate to these construction permits are addressed in the draft of the planned revised permit.

⁷ Electric Energy, Inc. has voluntarily submitted data for actual emissions of GHGs from Joppa in its Annual Emission Reports (AER). However, Joppa is not currently subject to any “applicable requirements,” as defined by Section 39.5(1) of the Act, for GHG emissions, as defined by 40 CFR 86.1818-12(a), as referenced by 40 CFR 52.21(b)(49)(i). There are no GHG-related requirements under the Clean Air Act, the Act, or Illinois’ SIP that apply to this source, including terms or conditions in a construction permit addressing GHG emissions or BACT for GHG emissions from a major project at this source under the PSD rules. In addition, the USEPA’s Mandatory Reporting Rule for GHG emissions, 40 CFR Part 98, does not constitute an “applicable requirement” because it was adopted under the authority of Sections 114(a)(1) and 208 of the Clean Air Act. The planned CAAPP permit would not relieve the source from its obligations for reporting under the Mandatory Reporting Rule.

Chapter 2 - Factual Basis for the Planned Permit Action

Construction Permits Issued Since the Initial CAAPP Permit Was Issued			
Permit No.	Date Issued	Date Revised	Subject
05100011	12/5/2005		Low NOx Burners with Separated Overfire Air System on Boiler 5
06100057	11/30/2006		Low NOx Burners with Separated Overfire Air System on Boiler 3
07090035	10/24/2007		Low NOx Burners with Separated Overfire Air System on Boiler 1
08020070	07/18/2008	12/01/2009	Sorbent Injection Systems for Units 1 through 6
08100052	10/31/2008		Low NOx Burners with Separated Overfire Air System on Boiler 4
11060053	6/30/2011	2/24/2012 1/11/2013	Additives Systems

Certain revisions to limits in existing state permits are planned, as listed below. These planned revisions to limits are discussed in Chapter 3 of this Statement of Basis.

Planned Revisions to Limits in Existing State Permits		
State Permit	CAAPP Permit Condition	Description of the Planned Revisions to the Construction Permit Limit(s)
90070073	7.2.6(b)	Limit on annual PM emissions lowered
93070073	7.6.6(b)	Separate limits for PM ₁₀ removed
09020049	7.6.6(b)	Separate limits for PM ₁₀ removed ⁸

The construction permits listed below, issued prior to 2005, were reviewed during the development of the initial CAAPP permit and are listed for informational purposes. The applicable requirements that originated from these permits are addressed in the initial CAAPP permit and will continue to be appropriately addressed in the revised permit.

Existing State Permits Addressed by the Initial CAAPP Permit		
Permit No.	Date Issued	Subject
92050038	7/22/1992	Gas Conditioning System
94100021	12/23/1994	Lox NOx Burners Unit 5
03040017	5/13/2003	Dust Control Equipment Replacement
05020008	3/3/2005	Boiler Unit 6 - OFA System Installation
92090019	10/16/1992	Low NOx Burners - Unit 3 Boiler
93010010	9/13/1993	Low NOx Burners - Unit 4 Boiler
93060068	8/30/1993	Low NOx Burners - Unit 1 Boiler
94020004	4/5/1994	Low NOx Burners - Unit 2 Boiler

⁸ Permit 09020049 was issued to Met-South, Inc., a wholly-owned subsidiary of Electric Energy, Inc. Met-South currently operates under a separate state permit (Permit 93070073) and the applicable limits established by that permit were not addressed in the initial CAAPP permit for Joppa. At the request of Electric Energy, Inc., those operations would be addressed by the revised CAAPP permit in planned new Section 7.6 of the permit. These operations would no longer be covered by a separate state operating permit.

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94060047	7/12/1994	Low NOx Burners - Unit 6 Boiler
99100060	11/26/2003	Limits on annual NOx emission limits for boilers ⁹

The construction permits listed below have been withdrawn at the request of the Permittee, and are listed for informational purposes. They were withdrawn for various reasons such as that emission units were temporary, the permit addressed tests or trials of pollution control methods or equipment, or the subject equipment was never constructed.

Construction Permits That Have Been Withdrawn	
Permit No.	Subject
93100088	Ammonia Flue Gas Conditioning System Units 3 and 4
06020085	Pilot Scale System for Study of Mercury Emissions Control
06110002	Pilot Evaluation of Mercury Emissions Control
08090057	Pilot Evaluation of SNCR System for NOx Control
10030045	Pilot Evaluation of Injection System for SO2 Control
12060001	Pilot Evaluation of Fuel Additives for NOx and Mercury Control
14110039	Pilot Systems for Evaluation of Alternative Additives and Agents

⁹ Construction Permit 99100060 was issued to Midwest Electric Power, Inc. (ID No. 127899AAA) for construction of an electric power facility with five gas turbine-generators at a site at Joppa. This facility functions independently of the coal-fired boilers at the Joppa Power Station and has a separate CAAPP permit. However, Construction Permit 99100060 relied on decreases in NOx emissions from the coal boilers. To make these decreases enforceable, Condition 6(b) of Construction Permit 99100060 set limits on annual NOx emissions for all coal boilers combined and for Boiler 5 by itself. Accordingly, these emission limits are addressed in this CAAPP permit for the coal-fired power plant.

Chapter 3 - PLANNED REVISIONS TO THE CAAPP PERMIT THROUGH SIGNIFICANT MODIFICATION

Introduction

The revisions described below are planned to be made in response to the Permittee's application requesting certain revisions to the provisions of the CAAPP permit, including certain revisions to the requirements for Periodic Monitoring in the initial CAAPP permit.¹⁰ These revisions that involve elements of Periodic Monitoring that are not explicitly required by applicable rules but were previously determined to be appropriate to ensure compliance with applicable substantive requirements. The Illinois EPA has determined that certain revisions to be these requirements are appropriate.

Section 5.0: Overall Source Conditions

Condition 5.2.6

This source-wide condition would be updated to more clearly identify the requirements imposed by 35 IAC 244 for development and implementation of an Episode Action Plan. This condition would also provide that the Episode Action Plan previously submitted to the Illinois EPA would be incorporated by reference into the CAAPP permit.

Condition 5.2.8

This source wide condition would be added to incorporate by reference the Control Measures Record submitted to the Illinois EPA as required by Condition 7.2.9(b) for coal handling equipment, Condition 7.3.9(b) for coal processing equipment and Condition 7.6.9(b) for fly ash handling. This condition would specify that any revisions to the Control Measures Records submitted to the Illinois EPA would be incorporated by reference into the CAAPP permit. The initial record was submitted to the Illinois EPA on November 7, 2016.

The condition would provide a 30-day period for the Illinois EPA to provide written notification to the Permittee of any noted deficiency with revisions to the "Control Measures Records" submitted. The condition would also provide for a 30-day period for the Permittee to respond to any such written notice.

Conditions 5.6.2 (introductory paragraph) and 5.6.2(a) and (b)

Various changes would be made to these conditions that address retention of required records by the source and the availability of required records for inspection and copying by the Illinois EPA and USEPA. In Condition 5.6.2., the introductory paragraph to these provisions, corrections would be made to the

¹⁰ Pursuant to Section 39.5(14)(c)(iii) of the Act, proceedings involving significant modifications to a CAAPP permit must use the same procedures that apply to initial issuance or renewal of a CAAPP permit.

sections of the Act that are identified as the origin and authority for Conditions 5.6.2(a) and (b), as well as Condition 5.6.2(c).

In Condition 5.6.2(a), changes would allow records to be kept at an off-site location if the location is readily accessible to the Illinois EPA and USEPA, as well as the source. This is because Section 39.5(7)(p)(ii)(B) of the Act only provides that a CAAPP source must keep required records so they are available for inspection by the Illinois EPA.

In Condition 5.6.2(b), changes would more fully address the possible circumstances surrounding requests for copies of records during an inspection of the source by the Illinois EPA or USEPA. This condition would now provide that copies of requested records may be provided in electronic form (e.g., a disk or flash drive), as well as in paper form. It would also provide that responses to voluminous requests for copies of records may be provided within 10 days of the date of a request unless a later date is agreed to by the Illinois EPA or USEPA.

Condition 5.6.2(d)

In the initial permit, this condition would have required the source to submit copies of certain records to the Illinois EPA. Those records would have identified the control practices used for certain emission units at the source as specifically identified in subsequent conditions of the permit. This requirement would be moved into each of the unit-specific sections of the permit for which the source is required to submit copies of these records to the Illinois EPA. These are the unit-specific sections of the permit dealing with material handling and processing i.e., Sections 7.2 and 7.3 of the initial permit. This change would clearly identify the emission units for which this requirement is applicable.

Conditions 5.6.1 and 5.7.2

Condition 5.6.1 of the initial CAAPP permit required the Permittee to maintain the records that are necessary to prepare its Annual Emission Reports. Pursuant to 35 IAC 254.203(b), Annual Emission Reports, among other things, must include "[s]ource-wide totals of actual emissions for all regulated air pollutants emitted by the source."

In addition, the initial permit would have explicitly required the source to maintain records of emissions of three pollutants, mercury (Hg), hydrogen chloride (HCl) and hydrogen fluoride (HF). The Illinois EPA included this requirement, in large part, because of public interest in emissions of these pollutants. In its appeal, the Permittee challenged the legal basis for such recordkeeping. At the time the initial permit was issued in 2005, emissions of Hg, HCl, and HF from the coal boilers at Joppa were not yet regulated by any federal or state regulations. The appeal thus questioned the ability of the permit to impose recordkeeping requirements for which no underlying statutory or regulatory requirement existed at the time the permit was issued.

The explicit requirements for recordkeeping for emissions of Hg, HCl and HF would be removed from the permit. This is because these pollutants did not meet

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the relevant definition of "regulated pollutants" for purposes of Annual Emission Reports when the initial permit was issued (refer to 35 IAC 254.120). It should be noted that recordkeeping for emissions of Hg and HCl is now required by the general language of Condition 5.6.1 which would reference the record retention requirements in 35 IAC 254.134. This is because both Hg and HCl are now "regulated pollutants" for purposes of Annual Emission Reports. Because the source is now required to maintain records for emissions of HCl, the removal of HF from Condition 5.6.1 is of minor significance because HCl serves as a surrogate for HF.

Condition 5.9

Condition 5.9 would be added to the permit to address the timing of certain requirements when the permit takes effect. For example, Conditions 7.2.8, 7.3.8 and 7.6.8 in the permit require the Permittee to conduct inspections of equipment and observations for visible emissions and/or opacity on a weekly, monthly, quarterly and annual basis. However, the permit will be issued on a date in the future when the specified time periods will have begun and only a portion of these periods remain. Condition 5.9 would generally provide that the source must initially conduct the required actions in this "remaining time" if more than half of the specified time period is still available (e.g., four days in week or 15 days in a month). Otherwise, the required actions must initially be completed by the end of the next complete time period. This approach reasonably accommodates the need of the source to have adequate time to conduct the initial inspections and observations that are required under the revised permit. This condition would also address timing for any initial reports required by the permit.

Section 7.1: Coal-Fired Boilers

Conditions 7.1.1 - Note

To improve clarity, a note would be added to this general description of the coal boilers confirming that this description is only for informational purposes and does not establish any requirements or limitations.

Condition 7.1.6(a) (i)

This condition of the initial CAAPP Permit required the source to perform combustion evaluations on each of the coal boilers. These evaluations will measure the carbon monoxide (CO) concentrations in the flue gas of the boilers and were required by the permit to address compliance with the state CO standard, 35 IAC 216.121. Among other things, this condition required a formalized procedure for obtaining "diagnostic" measurements, as well as "adjustments and preventative and corrective measures" of the boilers to ensure proper combustion.

The Permittee appealed the condition because the requirement for combustion evaluation appeared to require formalized emissions testing and that it was not appropriate to mandate "adjustments or other preventative and corrective measures." In settlement negotiations, the Illinois EPA acknowledged that the

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original intent of this condition was not to require formal diagnostic testing, which is an engineering evaluation of systems to gather data beyond the standard operational measurements. Rather, the intent was to obtain quantitative information from the standard operational measurements on a continuous or periodic basis and thus serve as an assessment for the functioning of combustion systems in a boiler. The permit would be revised to clarify this aspect of the combustion evaluation.

The permit would also be revised to clarify that adjustments or other measures are not a compulsory aspect of each combustion evaluation. The original intent was to ensure that adjustments or other corrective measures would occur if, depending upon the findings of a given evaluation, such changes are needed to restore combustion efficiency. The revised permit would now eliminate the ambiguity of the initial condition by providing that combustion evaluations include any "adjustments and corrective measures" undertaken to maintain combustion efficiency. Preventative measures also would no longer be separately addressed. This is because combustion evaluations, by their nature, are preventative so that any adjustments or corrective measures taken during a combustion evaluation are also appropriately considered to be preventative measures.¹¹ The source would still be required, consistent with the requirements of the initial CAAPP permit, to keep records of the adjustments and corrective measures that occur as part of combustion evaluations.

Consistent with the above discussion, the revised permit would require combustion evaluations for the coal boilers to be conducted semi-annually. The evaluations would still provide the quantitative information that is appropriate and would be consistent with other, similar types of reporting situations where semi-annual reporting is typical.

Condition 7.1.7(a) (ii)

In the revised permit, this condition would be removed in entirety and noted as "Intentionally Blank." This condition in the initial permit required that the source conduct testing for a coal boiler for PM emissions if the boiler operates for more than 30 hour total in a calendar quarter at a load that is 2 percent higher than the load at which testing was most recently conducted for the boiler. This change would respond to concerns expressed in public comments on drafts of CAAPP permits for other coal-fired power plants in Illinois regarding these criteria for further PM testing of a boiler based on the load at which it is operated.

¹¹ In the context of these combustion evaluations, the two classes of preventative actions that the revised CAAPP permit would contemplate that the source may take are adjustments and "other measures." Adjustments would involve changes to how equipment is operated. Adjustments would include changes to the standard settings for burners, dampers and other components of the combustion systems on a boiler. Adjustments also include changes to the settings in the automated combustion management system on a boiler. Changes to operational monitoring systems that accompany calibrations would also be adjustments. Measures other than adjustment that occur during a combustion evaluation would be considered "corrective measures."

In place of this condition, Condition 7.1.7(b) (i) in the revised permit would specify that the periodic testing of the coal boilers, as is required to authoritatively confirm compliance with state PM emission standards, must be conducted at "maximum normal operating load conditions." This requirement, which would use terminology in the MATS rule, 40 CFR 63 Subpart UUUUU, for PM emission testing, would serve to ensure that the required emission testing of the boilers is conducted as sufficiently high load that the results can be considered representative.

Condition 7.1.7(a) (v)

Condition 7.1.7(a) (v) addresses certain emission testing of the coal boilers that may be required as a result of firing or burning material other than standard fuel in the coal boilers. As present in the initial permit, this condition generally requires that testing must be conducted for the coal boilers for PM and CO emissions if in a calendar quarter standard fuel (i.e., coal, fuel oil and natural gas) make up less than 97 percent, by weight, of the material burned in a boiler. The revised permit would change this to require such testing be conducted if the alternative fuel burned during the quarter is greater than 3 percent by weight.

Changes would also be made to address aspects of this testing that were not considered or addressed during the development of the initial permit. This testing would not be required if testing has already been conducted for the boilers while burning alternative fuel at a level that would satisfy the requirements established by this condition. This testing also would not be required to be conducted while burning alternative fuel at a rate that would exceed the rates at which the feed systems for such materials will be operated. In addition, various changes were made to clarify the language of this condition.

Condition 7.1.7(a) (v) (A) would be changed so that this testing would not be required for the coal boilers if testing has already been conducted while burning alternative fuel at a level that would satisfy the requirements of this condition. For this purpose, this prior testing must have been conducted while burning alternative fuels at a level that is equal to or greater than the level at which such material was burned in a calendar quarter or at the maximum rate at which the feed systems for these materials will be operated. This change is needed because the initial permit did not consider that the source might proactively conduct the emissions testing that would otherwise be required by this condition, before it was actually required by this condition. The initial permit was predicated upon this testing being conducted following a calendar quarter in which the amount of standard fuel burned in a boiler was less than 97 percent by weight.

Condition 7.1.7(a) (v) (A) would also now provide that it would take effect after the first complete calendar quarter that Joppa operates under the revised CAAPP Permit. This is necessary so that when this condition first becomes applicable, data for a complete calendar quarter is available for comparison to the triggering criteria in this condition.

Condition 7.1.7(a) (v) (B) would be changed so that this testing would not be required to be conducted while burning alternative fuel at a rate that would exceed the maximum rate at which the feed systems for such materials are operated. This change is needed because this condition in the initial permit provides that the percentage of alternative fuel burned during this testing must be at least 1.25 times the percentage at which this material was burned in the calendar quarter that triggered the need to conduct this testing. This requirement was intended to assure that this testing would occur during appropriate operating conditions that would conservatively address the effect of burning alternative fuel on emissions. The initial permit did not consider that this requirement might require that the feed systems for these materials be operated at rates that would be higher than the capacity of these systems or the rates at which these systems would ever be operated. The revised permit would still require this testing to be conducted under appropriate operating conditions. This is because this testing would still be required to be conducted at least at 1.25 times the percentage at which such material was burned in the quarter that triggered the need for testing or at the maximum rate at which the feed systems will be operated, whichever is lower. This addresses circumstances in which the use of alternative fuel is constrained by the operation of the feed systems. It also addresses the circumstances if the use of these materials is far below the level at which the feed systems would be operated, so that the 1.25 time factor governs.

Various other changes would also be made to Condition 7.1.7(a) (v) to clarify terminology. These provisions would no longer refer to the "fuel supply" for the boilers. It was unclear whether this phrase referred to the material that was actually burned in the boilers, as was intended, or the material that was supplied to the source and was available to be burned in the boiler. In addition, "burning" or "burned" would be used in place of the word "firing." This change was made to use terminology that is simpler and now more common.

Condition 7.1.7(b) (i)

This condition in the initial permit required that measurements of PM and CO emissions be performed at the maximum operating loads of the affected boilers and other operating conditions that are representative of normal operation. As already discussed, this condition would be revised to be consistent with relevant provisions of the MATS rule that address the load at which PM testing is to be conducted. Consistent with 40 CFR 63.10007(a), testing would be required to be conducted "...at maximum normal operating load conditions..." which "...will be generally between 90 and 110 percent of design capacity but should be representative of the unit specific normal operations during each test run."

Condition 7.1.7(b) (iii)

In the initial CAAPP permit, this condition includes requirements for testing emissions of condensable particulate¹² from the coal boilers. The Permittee

¹² Filterable particulate exists as a solid or liquid material at elevated temperature in the stack, while condensable particulate is a vapor or gas in the stack and

challenged these requirements on appeal. It argued that they had no basis in law, questioning the authority of the CAAPP permit to require testing for condensable particulate when no underlying requirement existed in any applicable statutory or regulatory provision at the time of permit issuance.

The requirements for measurement of emissions of condensable particulate have been removed from this condition. This is because the underlying regulations did not provide support for such testing and it was beyond the scope of the Illinois EPA's express or implied permitting authority.

Condition 7.1.7(e) (iii) (C)

For the coal boilers, Condition 7.1.7(e) specifies the required contents of final reports that the source must submit for emission testing. Condition 7.1.7(e) (iii) (C) addresses information that must be included in these reports related to the operation of the combustion system during testing. Changes would be made to simplify this condition and facilitate its implementation. These changes are associated with the appeal by the Permittee of Condition 7.1.6(a), which requires the source conduct combustion evaluations for the coal boilers.

Settlement discussions revealed confusion about the nature of the operating information for the combustion system that Condition 7.1.7(e) (iii) (C) required to be provided in test reports.¹³ Upon further consideration, it has been concluded that this condition can be less prescriptive, to accommodate the various types of operating data that may be available for of the combustion systems on the boilers. Accordingly, this condition has been revised to provide greater flexibility and clarify the type of information that would be acceptable. The changes would accommodate reporting of data for CO as measured by operational instrumentation on a boiler, rather than requiring separate diagnostic measurements of CO.¹⁴ The condition continues to require the source to provide meaningful information in emission test reports for the operation of the combustion system on a boiler during testing.

Condition 7.1.7(e) (iii) (D)

Condition 7.1.7(e) (iii) (D) specifies information about the control equipment to be reported. The requirement to report "control equipment condition" was

condenses into a liquid or solid in the atmosphere after exiting the stack and cooling to ambient conditions. Method 202 is USEPA's reference test method for measuring condensable PM. Emissions testing for condensable particulate was not (and still is not) needed to confirm compliance with applicable emission standards for particulate, since current standards only address emissions of filterable particulate.

¹³ In the initial permit, Condition 7.1.7(e) (iii) (C) required information for the settings for the distribution of primary and secondary combustion air, the target levels for oxygen in the flue gas, and the levels of CO, carbon dioxide or oxygen, as determined by diagnostic measurements.

¹⁴ For the purpose of this discussion, "diagnostic measurements" are measurements that are made as part of a specific investigation to gather data that is not routinely collected or available for the boilers. "Operational measurements" are measurements that are taken on a regular basis, most commonly with instrumentation or devices that are permanently installed on the boilers.

ambiguous in the context of emissions testing. The condition would be revised to include control equipment operating parameters during testing, which more clearly conveys the information required for control equipment.

Condition 7.1.7(e) (iii) (F)

Condition 7.1.7(e) deals with required contents of test reports that the source must submit for emission testing conducted for the coal boilers. Condition 7.1.7(e) (iii) (F) would be added to the information that must be provided in these reports for the operation of the boilers during testing. It would require that these reports include information on the amount of alternative fuel burned during testing if the testing was conducted to address emissions while burning alternative fuel, as is required by Condition 7.1.7(a) (v).

Condition 7.1.9(a) (vi)

This condition, which requires recordkeeping related to the combustion evaluations that must be conducted for the coal boilers, would be revised to maintain consistency with the changes to be made in Condition 7.1.6(a) with respect to the nature of these evaluations, as already discussed. In particular, this condition would now recognize that these records only include a description of adjustments of corrective measures that were undertaken if any such actions took place as part of an evaluation.

Conditions 7.1.9(c) (ii) and (c) (iii) and 7.1.10-2(a) (i) (E)

Condition 7.1.9(c) sets forth recordkeeping requirements for the Continuous Opacity Monitoring Systems (COMS) on the coal boilers. The initial CAAPP Permit relied upon a correlation between opacity and PM emissions, such that the level of opacity is indicative of whether the ESPs are being properly maintained and operated for compliance with the applicable PM standard. Among other things, the initial CAAPP Permit established a methodology by which the Permittee was to develop an opacity value, during the permit term and through on-going emissions testing, that would be set at the "upper bound of the 95% confidence interval." This process thus would develop a specified, albeit potentially mutable, value for opacity that would serve as an indicator of a potential problem for PM compliance, triggering the obligation for further recordkeeping and reporting established elsewhere in the permit.

The Permittee appealed this condition on grounds that it imposed an "unreasonable burden" to develop an upper bound correlation and would not generate information that could be used in conjunction with inspections and opacity reports to assure compliance with the applicable PM standard. Subsequent settlement discussions confirmed the difficulties in the condition as stated. Among other things, it required a correlation between opacity and PM emissions to meet a statistical criterion as related to the confidence interval that would not necessarily be able to be met given the nature of the correlation and the data that would be available to develop the correlation.

Instead of requiring that an opacity value be developed in the future that must meet a specified statistical criterion, the revised permit would address compliance with the PM standard using with a specific value for opacity, 30

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percent, 3-hour average. This approach continues to rely on a relationship between opacity and PM compliance for the coal boilers. For both ease and conservatism, the selected numerical value of opacity corresponds to the value of the applicable state opacity standard in 35 IAC 212.123. This approach is adequate to assure compliance with the PM standard that applies to the boilers pursuant to 35 IAC 212.203, i.e., 0.19 lb/mmBtu.

The revised language would require the Permittee to keep a record of all 3-hour block averages in which the average opacity exceeds 30 percent. The language in Condition 7.1.10-2(a)(i)(E) in the initial permit, which required the source to undertake analysis and evaluation, and recordkeeping and reporting activities related to that condition, is no longer needed in light of the finding that the applicable state opacity standard will adequately assure compliance with PM, and would therefore be removed. It is also noteworthy that this approach would be temporary. It would be replaced by the approach in the CAM plan required by 40 CFR Part 64 for the boilers, which is addressed by planned Conditions 7.1.13-1 and 7.1.13-2 and discussed later in Chapter 5 of this Statement of Basis.

Conditions 7.1.9(d)(iii) and (e)(iii)

Recordkeeping for information required by 40 CFR Part 75 would be added.

Condition 7.1.9(e)(ii) and (iii)

NO_x emission recordkeeping requirements would be added related to NO_x limitations in Conditions 7.1.4(f) and 7.1.6(b) and the information required by 40 CFR 75.57(d).

Conditions 7.1.9(g)

This condition deals with recordkeeping associated with startup of the coal boilers. The initial CAAPP Permit required that the source maintain basic information, such as a copy of the startup procedures for the boilers and the date, time, duration, and description of each startup. The permit also required more detailed recordkeeping for any startup that lasted longer than 4 hours. The Permittee appealed this latter part of the conditions because typical startups of these boilers actually take longer than 4 hours. Accordingly, the initial permit inappropriately required additional recordkeeping and explanation for all startups regardless of the duration or atypical nature of the startup.

The intent of this condition was to require additional documentation and explanation for boiler startups that are out of the ordinary (atypical nature). For startups that take longer than normal, this would include information for why the startup was prolonged and the additional emissions that may have occurred as a result. The revised condition uses a longer duration for normal startup for a boiler, 12 hours, before more detailed recordkeeping is needed because of the duration of a startup. This reflects information provided by the Permittee during the settlement discussions showing that typical startups of these boilers can last as long as 12 hours.

Based on the information now provided by the Permittee, the information for and assumptions about the duration of typical startups of these boilers, which were the basis of the initial permit, were incorrect. As a result of evaluating several typical and atypical startups, up to 12 hours in duration should be considered typical for these boilers, given their design. This change addressed these errors in the development of the initial permit while still requiring the source to maintain additional records and reporting for atypical startups.

Conditions 7.1.9(h) (ii)

Various changes would be made to clarify these conditions dealing with the records that the Permittee must keep pursuant to 35 IAC 201.263 for incidents involving continued operation of the coal boilers with excess opacity or emissions during malfunction or breakdown. In Condition 7.1.9(h) (ii), the phrase "including malfunction and breakdown" would be replaced with "during malfunction and breakdown." This change eliminates ambiguity in the scope of this condition. As originally written, this condition might have been incorrectly interpreted as generally applying to malfunctions and breakdowns of the boilers that result in excess emissions. In fact, this condition only applies to malfunctions and breakdowns of a boiler involving excess opacity or emissions of PM or CO. This is apparent as it requires records for "malfunctions or breakdowns as addressed by Condition 7.1.3(c)." Condition 7.1.3(c) only addresses exceedances of the opacity, PM and CO standards that apply to the coal boilers. In this regard, as required by 35 IAC Part 201 Subpart I when appropriately requested by a source in its application, Condition 7.1.3(c) provides the first-stage of approval or "recognition" that in certain circumstances continued operation of an emission unit with particular state emissions standards being violated may occur during malfunction or breakdown.

In Condition 7.1.9(h) (ii), the phrase "at a minimum" would also be removed, so that the condition would no longer suggest that the source must keep records of certain other information related to malfunctions and breakdowns that is not specifically identified or described in this condition. It is not appropriate for this condition to impose such an open-ended obligation on the source for the records that it must keep. It poses the potential for future disputes between the source and the Illinois EPA about the nature of the information that the source should have been keeping pursuant to this condition.

In Condition 7.1.9(h) (ii) (A), a parenthetical would be added following "duration" to further define this term, "(i.e., the length of time during which operation continued with excess opacity or emissions or until repairs were completed or the boiler was taken out of service)."

In Condition 7.1.9(h) (ii) (B), the phrase "to reduce the duration" would replace "the duration." This clarifies that this provision addresses the records that must be kept by the source describing the actions that are taken during a malfunction or breakdown incident to reduce the duration of the incidents. Records related to the actual duration of an incident are already separately required by Condition 7.1.9(h) (ii) (A).

Condition 7.1.9(h) (ii) (D) addresses certain additional records that must be kept for particular malfunctions and breakdowns involving the coal boilers.¹⁵ As related to emissions, these records are required for incidents in which the applicable hourly standard for PM or CO was exceeded during the incident. These records are also required for incidents in which emissions "may have exceeded" the applicable standard during the incident. Changes would be made to clarify the circumstances in which the additional records must be kept for possible exceedances, when a standard may have been exceeded. The requirement for actual exceedances of standards is unchanged. For possible exceedances, the revised condition would now require that the additional records must be kept if the source "...believes that compliance with the PM standard likely was not maintained." In the initial CAAPP Permit, the phrase "may have exceeded" in this provision recognized that, the source will not be able to precisely determine PM emission rates during malfunction and breakdown incidents since continuous emission monitoring is not conducted for PM. The change to the provision clarifies that the additional records need not be kept simply because there is a possibility, perhaps only a hypothetical possibility, that the PM standard was exceeded. For CO, the change to this provision reflects further consideration by the Illinois EPA and a conclusion that the source may more readily determine compliance with the CO standard. This is because "add-on control equipment" is not used for CO and proper functioning of the combustion system is addressed by regular combustion tuning. Accordingly, for CO, the additional records need not be kept for possible exceedances of the applicable standard and need only be kept for known exceedances of the standard.

Condition 7.1.9(h) (ii) (D) (III) in the initial permit required the source to keep records for malfunction and breakdown incidents for the magnitude of the PM or CO during the incident. Changes would be made to clarify the nature of the information that must be included in these records that address the magnitude of emissions during incidents. To accomplish this, Condition 7.1.9(h) (ii) (D) (III) would be replaced by two new conditions, Conditions 7.1.9(h) (ii) (E) and (F), dealing with PM and CO emissions, respectively. This separation was needed because of the difference in the approach to the exceedance of PM and CO standards, where possible exceedance must be addressed for PM. Both of these new conditions would now provide that the records must include "estimates of the magnitude of emissions ..., with magnitude estimated on a qualitative or, if available, quantitative basis." In the initial permit, Condition 7.1.9(h) (ii) (D) (III) simply required the source to keep "Estimates of the magnitude of emissions..." This change explicitly recognizes that the information for the magnitude of emissions that is required may either be qualitative in nature, e.g., small, moderate or large, or quantitative in

¹⁵ For opacity exceedances, these additional records, which are related to the need for continued operation during exceedances and the preventative measures that were taken, are only required for incidents in which the opacity standard is exceeded for more than two hours. The source must address incidents in which the duration of opacity exceedances is two hours or less as a group in its quarterly compliance reports for the coal boilers. For example, refer to Condition 7.1.10-2(d) (v).

nature. This was implicit in the initial permit as it referred to an estimate of the magnitude.¹⁶

Condition 7.1.10-1(a)

As already explained, Condition 7.1.10-1(a) deals with the prompt reporting of deviations for the coal boilers. Conditions 7.1.10-1(a)(i), (ii) and (iii) delineate the applicable requirements for such reporting for different classes of deviations. Various changes would be made to these conditions to more clearly set forth what is required as prompt reporting for different classes of deviations. The changes respond to concerns that this condition in the initial permit was not entirely clear in how it relied upon certain other notifications and reports that must be provided for these boilers to fulfill the general obligation under the CAAPP that a source notify the Illinois EPA of all deviations that occur.

Condition 7.1.10-1(a)(i) (Conditions 7.1.10-1(a)(i) and (ii) in the initial CAAPP permit) addresses prompt reporting for "particular deviations" from the applicable standards for PM and opacity. These particular deviations are deviations for which reporting is separately required under Condition 7.1.10-3(a). For these boilers, Condition 7.1.10-3(a) requires immediate reporting and/or follow-up reporting for exceedances associated with malfunction or breakdown incidents, as provided for by 35 IAC 201.263.¹⁷ In the revised permit, Condition 7.1.10-1(a)(i) would now address both PM and opacity exceedances, combining Conditions 7.1.10-1(a)(i) and (ii) in the initial permit. This condition continues to provide that prompt reporting for these particular deviations is to be made by reporting in accordance with Condition 7.1.10-3.

Condition 7.1.10-1(a)(ii) (Condition 7.1.10-1(a)(iii) and (iv) in the initial CAAPP permit) addresses prompt reporting for deviations from the applicable standards for opacity, PM, SO₂ and NO_x and associated requirements for continuous monitoring. In the revised permit, this condition continues to generally provide that prompt reporting for these other deviations is to be made by reporting in the quarterly compliance reports for the boilers. The revised condition would now recognize the exception to this practice, i.e., the deviations from PM and opacity standards which must be separately reported

¹⁶ An "estimate" is an approximate calculation, a judgment, or the extent of a thing. The "magnitude" of a thing is its greatness of size, volume or extent, or its importance or significance. Accordingly, the original provision only required the source to conduct an evaluation for the level of emissions during an incident that potentially might conclude only that emissions were possibly noncompliant, slightly noncompliant, moderately noncompliant or seriously noncompliant. The provision did not require a precise numerical quantification for emissions of either PM or CO.

¹⁷ As will be discussed in more detail later, Condition 7.1.10-3(a) requires follow-up reports within 15 days of malfunction/breakdown incidents that involved continued operation of a coal boiler in violation of the PM standard. It also requires immediate reporting accompanied by follow-up reports for incidents in which the opacity standard was exceeded for eight or more six-minute averages in a two-hour period.

under Condition 7.1.10-3(a), as addressed by Condition 7.1.10-1(a)(i), as has already been discussed.

Condition 7.1.10-1(a)(iii) (Condition 7.1.10-1(a)(v) in the initial CAAPP permit) addresses prompt reporting for "other deviations," i.e., deviations that are not addressed in the preceding provisions of Conditions 7.1.10-1(a). In the revised permit, Condition 7.1.10-1(a)(iii) would continue to provide that prompt reporting for other deviations is to be made by reporting in the quarterly reports for the boilers. The provision would now be clearer by no longer defining these deviations by exclusion. That is, these other deviations would not be described as being deviations that are not addressed by the preceding conditions. These other deviations are instead directly described as being deviations from work practice requirements and recordkeeping requirements.

Other changes would be made to Condition 7.1.10-1(a) consistent with CAAPP permits issued to other coal plants in Illinois.

Condition 7.1.10-1(b)

For the coal boilers, Condition 7.1.10-1(b) sets forth requirements for "periodic reporting" of deviations.¹⁸ Various changes would be made to clarify what is required as periodic reporting for deviations that have been already been reported as part of prompt reporting. These "already reported deviations" are addressed in Condition 7.1.10-1(b)(i). These deviations would involve PM emissions or opacity and have been addressed in event-specific reporting pursuant to Condition 7.1.10-3(a). For these deviations, Condition 7.1.10-1(b)(i) would now provide that the source must provide a listing of the notifications and reports that have already been provided to the Illinois EPA. In the initial permit, the source was required to provide a listing of these deviations that would include identification of the notifications and reports that have already been provided for those deviations. In addition, because of the restructuring of Condition 7.1.10-1(a), which deals with prompt reporting of deviations, a change would be made to the cross-reference in Condition 7.1.10-1(b)(i). This condition would now refer to Condition 7.1.10-3(a), rather than Conditions 7.1.10-1(a)(i) and (ii). This is the condition in the revised CAAPP permit that, as part of prompt reporting of deviations, now requires notifications and reports for certain deviations separate from reporting in the quarterly reports.

A change would also be made in Condition 7.1.10-1(b)(ii), which deals with deviations that have not already been separately reported to the Illinois EPA. Because of the restructuring of Condition 7.1.10-1(a), a change would also be needed to the cross-reference in this permit. It now refers to Conditions 7.1.10-1(a)(ii) and (iii) rather than Conditions 7.1.10-1(a)(iii) and (v).

Condition 7.1.10-2(a)(iii)

¹⁸ Under the CAAPP program, sources must provide both prompt reports for individual deviations and periodic, or comprehensive, reports for all deviations. (Refer to Sections 39.5(7)(f)(i) and (f)(ii) of the Act, respectively.)

This condition would be revised due to the addition of Condition 5.9(e) to specify the timing for submittal of quarterly reports during the first 12-months after effectiveness of the revised permit

Condition 7.1.10-2(b) (iii) (C)

The condition would be revised to specify that the one-hour and three-hour average SO₂ emissions for each three hour block of excess emissions is to be included in quarterly reports.

Condition 7.1.10-2(b) (iii) (D)

Clarification of reporting for excess SO₂ emissions would be made to include whether such excess emissions occurred during startup, malfunction or breakdown of the boiler.

Condition 7.1.10-2(d) (iii), (v), and (vi)

These conditions deal with information that must be included in quarterly reports related to opacity exceedances. These conditions would be revised to more clearly specify the information that the Permittee must include in quarterly reports regarding all opacity exceedances during the quarter as well as further information that must be included in these reports regarding opacity exceedances or groups of opacity exceedances that resulted from the same or similar causes. The revised conditions better reflect the required contents of these reports, as specified by Section 39.5(7) (f) (ii) of the Act.

Specifically, Condition 7.1.10-2(d) (iii) would now clearly identify the items that the Permittee must include in a summary of information for each period of excess opacity during the quarter. The requirement to include a detailed explanation of the cause and corrective actions for each period of excess opacity would be removed from this condition because this information would be addressed in Condition 7.1.10-2(d) (v). This condition continues to require the Permittee to identify the cause for each period of excess opacity, if known, and any corrective actions taken.

Condition 7.1.10-2(d) (v) would now require the Permittee to provide further information for opacity exceedances or groups of opacity exceedances with "recurring" causes or "new" causes during the quarter. The conditions would define "recurring" causes as those that also resulted in exceedances during the previous quarter and "new" causes as those that did not result in opacity exceedances during the previous quarter.

For "recurring" cause opacity exceedances or groups of opacity exceedances each quarterly report shall include: an explanation of any particular circumstances or factors during the quarter that affected the number or magnitude of such exceedances; a discussion of any changes in the corrective actions taken in response to such exceedances during the quarter as compared to the previous quarter; and a discussion of any additional preventative measures that were taken during the quarter to reduce the number or magnitude of exceedance(s).

For "new" cause opacity exceedances or groups of opacity exceedances each quarterly report shall include: an explanation of the cause(s) or probable cause(s) of such exceedance(s), to the extent known; a discussion of any particular circumstances or factors during the quarter that resulted in such exceedance(s); the corrective action(s) taken, if any, with explanation of how those action(s) functioned to end the exceedance(s); and a discussion of any preventive measures taken to reduce the number or magnitude of exceedance(s).

Condition 7.1.10-2(d) (vi) would be revised to clarify the technical terms commonly used by the Permittee.

Condition 7.1.10-2(d) (iv)

Condition 7.1.10-2(d) (iv) deals with the information that the Permittee must include in its quarterly compliance reports for the coal boilers for exceedances of the applicable PM emission standard, 35 IAC 212.202. In the revised permit, a change would be made to Condition 7.1.10-2(d) (iv) (A) (III) for purposes of clarification. For such exceedances, this condition would now require that these reports must include, in addition to other required information, information for "The qualitative or, if available, quantitative magnitude of the exceedance." In the initial permit, this condition required the source to provide information for "The magnitude of the exceedance." As already discussed, this change would explicitly recognize that the information for the magnitude of exceedances of 35 IAC 212.203 that is required may be either qualitative or quantitative in nature.

A change would also be made so that these reports need not include information for the opacity of emissions on a 6-minute average, as required by Condition 7.1.10-2(d) (iv) (A) (IV) of the initial permit. As already discussed, the revised permit relies upon opacity of emissions on a 3-hour average, rather than on a 6-minute average, as the indicator of compliance of the coal boilers with 35 IAC 212.203.

With the removal of Condition 7.1.10-2(d) (iv) (A) (IV) from the revised permit, the subsequent conditions in Condition 7.1.10-2(d) (iv) would be renumbered (i.e., Conditions 7.1.10-2(d) (iv) (A) (V) through (VII), became Conditions 7.1.10-2(d) (iv) (B) (IV) through (VI)). Certain other minor changes would also be made in these conditions for purposes of clarification. For example, in renumbered Condition 7.1.10-2(d) (iv) (A) (IV), which requires information on how an exceedance was identified, the phrase "in addition to the level of opacity" would be changed to "if other than the level of opacity."

Condition 7.1.10-3(a)

This condition deals with reporting in the case of continued operation of the coal boilers during malfunctions and breakdowns. The condition requires the source to provide certain notifications and reports concerning incidents when the operation of a boiler continued with excess emissions during malfunction or

breakdown of the boiler.¹⁹ All such incidents must be reported by the source in its quarterly reports under Condition 7.1.10-1(b) (periodic reporting of deviations) as well as Condition 7.1.10-2(d) (reporting related to opacity and PM emissions). Condition 7.1.10-3(a) (i) further provides that the source must immediately notify the Illinois EPA for certain incidents. For example, as related to excess opacity, the Permittee must immediately notify the Illinois EPA when the opacity from a boiler exceeds the applicable opacity standard for the specified number of 6-minute averaging periods (unless it has begun shutdown the boiler by that time). Condition 7.1.10-3(a) (ii) further provides that the source must provide incident-specific follow up reports for certain incidents. These provisions in Condition 7.1.10-3(a) implement 35 IAC 201.263, which provides that, unless otherwise specified in a permit, sources must immediately notify the Illinois EPA of continued operation with excess emissions during malfunctions or breakdowns when a permit provides first-stage preliminary approval for violations of state standards during malfunction or breakdown. The Permittee appealed various aspects of Condition 7.1.10-3(a), many of which have already been discussed.

In the introductory paragraph of Condition 7.1.10-3(a), the Permittee expressed concerns about the scope of the requirements related to reporting incidents of continued operation during malfunction or breakdown. As a result this condition would be rephrased to clarify this reporting requirement was limited to incidents when operations continued during malfunction or breakdown with excess emissions or excess opacity.

With respect to immediate reporting, as addressed in Condition 7.1.10-3(a) (i), the Permittee expressed concerns during the settlement discussions about providing immediate notification for opacity exceedances at a time when the circumstances surrounding the exceedance may still be unfolding or the investigation is only at an initial stage. It became apparent that some of the assumptions that the Illinois EPA had made when initially selecting a timeframe of 30 minutes (five 6-minute averaging periods) were incorrect. It had been assumed that 30 minutes would provide a reasonable opportunity for the source to complete corrective action so that the source would not need to undertake immediate reporting to the Illinois EPA for opacity exceedances that were relatively brief and accordingly likely minor in nature. In addition, it was believed that 30 minutes would provide adequate time for the source to conduct an initial evaluation for more serious incidents, for which immediate reporting would be needed, so that such reports would include useful information. Finally, it was also believed that 30 minutes would provide appropriate incentives for rapid implementation of corrective actions. However, it is now recognized that 30 minutes is not adequate for these purposes.²⁰ Accordingly, the time before the immediate notification requirement is triggered would be

¹⁹ Condition 7.1.10-3(a) (ii) requires incidents in which the PM standard was exceeded to be reported to the Illinois EPA within 15 days.

²⁰ To illustrate, once an opacity exceedance occurs, staff will likely have to physically travel to the suspected location of the problem, then inspect and diagnose what is happening, and, if necessary, call in supervisory staff - all before the possibility of corrective action becomes available. This provides very little time to take corrective action within 30 minutes.

increased from five to eight 6-minute averaging periods (30 minutes to 48 minutes). The source would now have 18 additional minutes in which to correct the problem or begin to shut down a boiler before it needs to provide immediate notification. This will more effectively accomplish the underlying purposes of this requirement. The resulting consequences for compliance are expected to be trivial given the relatively small amount of additional time that the source has been provided.

With respect to immediate reporting for PM exceedances, as also addressed in Condition 7.1.10-3(a) (i), the Permittee generally expressed concerns during the settlement discussions about providing immediate notification for any exceedances. Upon further consideration, the Illinois EPA has concluded that it is more appropriate to address PM exceedances with follow-up notification. This is because it will be difficult to address PM compliance on a real-time basis. Moreover, notification for incidents that are likely of interest for PM will have been provided by means of the provisions of the permit for immediate notification related to opacity.²¹

With respect to follow-up reporting for PM exceedances, as addressed in Condition 7.1.10-3(a) (i), the Permittee generally expressed concerns during the settlement discussions about providing any follow-up reports for possible exceedances of the PM standard. Upon further consideration, the Illinois EPA has concluded that it is more appropriate to address possible PM exceedances through the regular quarterly compliance reports rather than with follow-up reports. Accordingly, this condition would now only require incident specific reporting, with reporting to the Illinois EPA within 15 days of an incident, for actual exceedances of the PM standard. Other changes would also be made to simplify and clarify this condition. Rather than restating the required contents of these reports, this condition would now refer to the applicable records that must be kept for such incidents, as addressed in Condition 7.1.9(h) (ii).

Condition 7.1.12(a) (ii) (A)

This condition addresses 35 IAC 212.123(b), which provides that opacity may be greater than 30 percent, 6-minute average, if opacity was not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such emissions only come from one source within a 1000 foot radius, limited to three times in any 24 hour period.

As discrete measurements of opacity may be used to comply with this standard, Condition 7.1.12(a) (ii) (A) would be revised to allow discrete measurements to be made at up to 15 seconds intervals, instead of the 10 second interval provided by the initial permit. With this revision, the permit would still provide for the reasonable implementation of 35 IAC 212.123(b) by the Permittee. This revision would also potentially reduce the amount of data that

²¹ It is noteworthy that immediate notification is required for incidents in which the aggregate duration of opacity exceedances is less than one hour. For opacity, immediate notification is required if the opacity standard is exceeded for more than seven 6-minute averages in a two-hour period, i.e., more than 42 minutes.

must be considered when the Permittee elects to show compliance by means of this alternative to 35 IAC 212.123(a). It would also accommodate existing software for continuous opacity monitors systems that records measured data at an interval greater than 10 seconds.

Condition 7.1.12(a) (ii) (C), (D) and (E)

Certain changes would simplify Condition 7.1.12(a) (ii), which sets forth additional compliance procedures for the coal boilers if the source elects to rely on 35 IAC 212.123(b). This standard generally allows opacity greater than allowed by 35 IAC 212.123(a) under certain specified circumstances, limiting opacity in those circumstances to no more than 60 percent.²²

The various provisions in Condition 7.1.12(a) (ii) in the initial permit were developed to set forth the additional compliance procedures that the Illinois EPA then believed were needed to address the provisions of 35 IAC 212.123(b) if the source elects to rely on this rule. This was because the source must have appropriate information to be able to show compliance under 35 IAC 212.123(b) if it chooses to rely on this rule. These additional compliance procedures are needed because there are aspects of 35 IAC 212.123(b) that cannot be properly addressed using only the information that would be collected pursuant to the compliance procedures for 35 IAC 212.123(a). Among other things, to show compliance with 35 IAC 212.123(b) for an emission unit, a source needs to have "short-term data" for opacity, e.g., minute-by-minute data, for the unit as well as data for opacity of the unit on a 6-minute average.²³

²² The alternative standard 35 IAC 212.123(b) is available to all emission units that are subject to 35 IAC 212.123(a). When originally adopting standards for opacity, the Board recognized that there would be certain circumstances in which the general 30 percent opacity standard should not be applicable for an emission unit. The Board specifically considered whether the alternative opacity standard that is now codified as 35 IAC 212.123(b) would accommodate soot blowing at existing coal boilers. Soot-blowing is the process of periodically blowing deposits of soot and ash off the tubes of a coal boiler by blasts of air or steam. Soot blowing must be performed on a regular basis while the boiler is operating to prevent accumulations of material in the boiler that would reduce the boiler's thermal efficiency or pose a safety risk. For the short periods when soot blowing occurs, the opacity of the emissions from a coal-fired boiler is higher. The Board concluded that the process of soot blowing would reasonably be accommodated in most cases by this standard (Illinois Pollution Control Board, *In the Matter of Emission Standards*, April 13, 1972, IPCB R-71-23A, p. 14). As soot blowing of a coal boiler results in opacity greater than 30 percent, this standard would allow soot blowing to be conducted in three hours in a 24-hour period (once per eight-hour shift), with the aggregate duration of higher opacity in each such hour restricted to at most eight minutes. In addition, opacity during such soot-blowing is limited to no more than 60 percent. The standard in 35 IAC 212.123(b) is similar to the approach taken by USEPA in the opacity standards for new boilers in the New Source Performance Standards (NSPS), 40 CFR 60 Subparts D, Da, Db and Dc. These rules provide for short periods of higher opacity.

²³ The Board originally adopted the opacity standard that has now been codified as 35 IAC 212.123(b) in 1972. This was before USEPA adopted revised Reference Method 9 in 1974. The Ringelmann Chart was still an acceptable method for conducting observations for opacity in 1972. The Ringelmann Chart involved comparing the observed opacity from an emission unit to charts or cards that represented six levels of opacity, from clear

In the revised permit, various changes would be made to simplify the provisions of Condition 7.1.12(a)(ii), thereby addressing aspects of these provisions that the Permittee had appealed. Significant changes would not be made to Condition 7.1.12(a)(ii)(B), which addresses the need for the source to be able to review this short-term opacity data to address whether all elements of this rule have been satisfied.

Condition 7.1.12(a)(ii)(C) addresses information that the source must have for the opacity of emission units at the source other than the coal boilers if it relies on 35 IAC 212.123(b). The revised permit would now simply provide that the source must have representative opacity data for such other units, as is required to be collected pursuant to the permit. Upon further consideration, it was concluded that more extensive requirements need not be set for this data for other emission units.²⁴ The aspect of 35 IAC 212.123(b) that Condition 7.1.12(a)(ii)(C) addresses is that this rule is only available for one emission unit at a source in any hour, unless the emission units are located more than 1,000 feet apart. This aspect of this rule can be addressed using representative opacity data for emission units other than the coal boilers. Short-term, concurrent opacity data need not be available for these other units since this rule is only likely to be relied upon for the coal boilers. This is because coal boilers can have transitory variation in the levels of opacity that would be such that they could potentially be covered by 35 IAC 212.123(b).

Condition 7.1.12(a)(ii)(D) addresses the information that must be included in quarterly compliance reports for the coal boilers with respect to reliance on 35 IAC 212.123(b). If the source relies upon this rule, the revised permit would now simply require that the source confirm in the compliance report that the relevant short-term opacity data shows that the terms of this rule were met. It would not include other incidental language. Upon further consideration, it was determined that the other, incidental language in this provision in the initial permit, which could be construed as codifying a particular interpretation of 35 IAC 212.123(b), need not be included in the permit.

to totally opaque. The 30 percent opacity standard in 35 IAC 212.123(a) was subsequently revised by the incorporation of Method 9 into Illinois' rules, converting the time-basis of this standard to a 6-minute average, consistent with Method 9. However, no such revisions were made to the rule that has now been codified as 35 IAC 212.123(b). Because 35 IAC 212.123(b) requires a determination whether opacity from a unit has been greater than 30 percent for a period or periods aggregating 8 minutes in any 60 minute period, the implementation of this rule requires that opacity be determined for periods that are less than six minutes in duration. This is readily accomplished for the coal boilers at the Joppa Power Station as continuous opacity monitoring is conducted for these boilers.

²⁴ Condition 7.1.12(a)(ii)(C) in the initial permit required that the source: For other emission units at the source, have the ability to review short-term opacity data representative of such units during hours in which the opacity of the affected boilers on a short-term basis may exceed 30 percent, to confirm that the opacity of any other unit at the source did not exceed 30 percent in any minute during an hour in which the short-term opacity of the affected boilers may have exceeded 30 percent.

Condition 7.1.12(a)(ii)(E) addresses the notice to the Illinois EPA that is appropriate if the source changes aspects of its procedures associated with reliance on 35 IAC 212.123(b). The revised permit would now simply provide that the source must notify the Illinois EPA if it changes the type of short-term opacity data that it is collecting for the coal boiler. In addition, this notification would be provided with the next quarterly report.²⁵ Upon further consideration, it was recognized that the specific aspect of the source's procedures that is of interest to the Illinois EPA is the type of short-term opacity data that is collected. In addition, any changes to the type of short-term data by a source can be appropriately considered by the Illinois EPA during the routine review of quarterly compliance reports. The Illinois EPA does not need to review proposed changes to the type of short-term data in advance of any such change since the source must continue to satisfy all elements of 35 IAC 212.123(b) if it is relied upon. For both the source and the Illinois EPA, the changes to Condition 7.1.12(a)(ii)(E) appropriately simplify this aspect of the compliance procedures associated with reliance on 35 IAC 212.123(b).

Section 7.2: Coal Handling and Coal Processing Equipment

Conditions 7.2.3(b) and 7.3.3(b)

New Conditions 7.2.3(b) and 7.3.3(b) would address continued operation with violation of certain state standards during malfunction and breakdown. Electric Energy, Inc. requested that the coal handling and coal processing operations be provided authorization to continue operations in the event of malfunction or breakdown, in accordance with 35 IAC Part 201 Subpart I. As addressed in the Forms 204-CAAPP, submitted on August 23, 2016, this authorization was requested for the opacity standard at Condition 5.2.2(b) and process weight rate standards in Condition 7.2.4(c) and 7.3.4(c). As indicated on the submitted forms, continued operation of subject operations may be needed in the event of a malfunction or breakdown because a disruption in the fuel supply to the boiler could potentially cause a safety or explosion hazard condition or interfere with providing essential electric service to the public. Based on the nature of the subject units and their operating history, these events would be extraordinarily unlikely. However, the source has requested that the permit address the possibility that such an event might occur as currently provided for by 35 IAC 201 Subpart I.

The new conditions would only address continued operation of the subject units as necessary to protect against such conditions. They require that Electric Energy, Inc. repair the affected process, remove the affected process from service or undertake other actions soon as is practicable so that excess emissions cease. These conditions would be accompanied by additional

²⁵ Condition 7.1.12(a)(ii)(E) in the initial permit required that the source: Notify the Illinois EPA at least 15 days prior to changing its procedures associated with reliance on 35 IAC 212.123(b), to allow the Illinois EPA to review the new recordkeeping and data handling practices planned by the Permittee.

requirements for recordkeeping and reporting to address incidents in which operation continued during malfunction and breakdown with excess emissions.

The new conditions addressing continued operation of the subject units with excess opacity and emissions would not provide that exceedances of the identified state standards during malfunction and breakdown would not be violations. In accordance with 35 IAC 201.265, these conditions would provide the source with a prima facie defense for those violations in an enforcement action provided, however, that the source complies with the relevant requirements of the CAAPP permit.²⁶

Conditions 7.2.4(c), 7.2.5(a) and 7.2.9(b)(ii)

Condition 7.2.4(c) would be added because the PM emissions of the coal unloading, coal transfer conveyors and coal storage bunkers are subject to the "process weight rate rule," 35 IAC 212.321. Condition 7.2.5(a) would be revised to specifically indicate, that as provided by 35 IAC 212.323, that coal storage piles are not subject to this rule.

In addition, recordkeeping requirements to address new Condition 7.2.4(c) would be added to Condition 7.2.9(b)(ii).

Condition 7.3.4(c)

Changes would be made so that the language in this condition quotes the wording of 35 IAC 212.322(a). The equations and table from 35 IAC 212.322(b) and (c) would be removed from this condition because this information is also included in Attachment 2 of the permit.

This condition would also be revised to make clear that compliance with 35 IAC 212.322 must be individually shown for the units. This is because these units are not controlled by shared control device(s).

Conditions 7.2.6(a) and 7.3.6(a)

Conditions 7.2.6(a) and 7.3.6(a) address the control measures for handling and processing of coal, as well as the related requirements to "operate and maintain" these control measures on an on-going basis.²⁷ In its appeal, the

²⁶ The emission standards that are addressed reflect technology-based, regulatory determinations for the appropriate levels of opacity and PM emissions from certain categories of emission units. As such, it should not be assumed that exceedances of these standards would pose a threat to ambient air quality.

²⁷ Various control measures have long been used by the source and will continue to be used for the subject units, independent of the CAAPP permit, for reasons related to worker safety, reliability of operation, and operational costs. The inclusion of the requirement for use of control measures in the CAAPP permit is significant in that it codifies this practice and is accompanied by provisions for verifications.

In general, the initial CAAPP permit did not identify the specific control measures that would be used for each subject unit but, rather, placed the responsibility for such identification upon the source. The revisions to the permit would retain the intent of the initial permit. They would continue to allow the source to select the

Permittee challenged various elements of the Periodic Monitoring for the coal handling and coal processing operations.

In Conditions 7.2.6(a)(i) and 7.3.6(a)(i), various changes to the language would be made. The language would be revised to focus on PM emissions generally instead of simply visible emissions. The modifying language "minimize" and "provide assurance of compliance with" would be removed as it is not appropriate in the context of the control measures for emissions of particulate matter from material handling and processing operations that are being addressed in this condition. In the context of these conditions, the use of the word "minimized" was not appropriate. It could be incorrectly construed to mean emissions must be "reduced to the least amount possible" whereas the intended meaning was simply that measures must be implemented that "reduce the generation of emissions." The phrase "assure compliance" also was not appropriate. In the context of the subject permit conditions, the phrase is vague as it does not further address the degree of assurance that is required. It also does address how control measures are to be evaluated to demonstrate that they assure compliance.

The planned new language would more clearly reflect the objective for these conditions, consistent with the Illinois EPA's intent at the time that the initial permit was issued. In this regard, the conditions would indicate that these provisions for control measures "support the periodic monitoring" as they serve to facilitate the Periodic Monitoring that is required by the permit for the subject operations. It is much simpler to address the implementation of control measures on an ongoing basis than to confirm compliance with an opacity or emission standard. Implementation of control measures can be addressed by appropriate records and routinely verified with inspections by personnel of both the source and the Illinois EPA.²⁸ The phrase "support the periodic monitoring" would also indicate that these

control measures used for PM emissions and contain an illustrative list of the types of control measures that would be used for this purpose. In this regard, the permit provides for use of the control measures for dust that have historically been used by the source.

At the same time, consistent with the initial permit, the revised permit also retains requirements to make the use of the selected control measures enforceable as a practical matter. In this regard, the source must identify such measures within 60 days of the issuance of the permit. Thereafter, it must maintain a record identifying these measures and, if different measures would potentially be used depending upon the circumstances, the circumstances in which particular control measures would be used. The CAAPP permit generally identifies the control measures to be employed by the source, as they are described in both the equipment descriptions and equipment lists contained within the permit. When coupled with the requirement to implement and maintain control measures, the permit requires the source to use control measures as so described or listed in the accompanying condition. The permit also does not establish whether, or which, control measures must always be operated, as doing so would contradict the intended use of such controls. The planned revisions to the permit would not alter these substantive requirements in the initial permit for use of control measures by the source.

²⁸ Pursuant to USEPA Reference Method 9, determinations of opacity can only be made by certified observers and only when the position of the sun or the source of light is such that observations can be made from an acceptable location.

requirements for implementation of control measures are not included in the permit to directly address compliance with the applicable emission limits.²⁹ Given that there are no underlying state or federal regulatory requirements for these work practices, the revised language would more closely align with the supporting legal authority under the CAAPP to accomplish the purposes of the requirements for Periodic Monitoring in Section 39.5(7)(a) of the Act.

In Conditions 7.2.6(a)(ii) and 7.3.6(a)(ii), minor wording changes would be made to address the Permittee's concern that these provisions may have inadvertently created stand-alone obligations separate from the preceding requirements to implement and maintain control measures. In addition, the Permittee sought assurance that compliance with the accompanying recordkeeping for the control measures (together with applicable testing and inspection) satisfied the over-arching work practices obligation in Conditions 7.2.6(a)(i) and 7.3.6(a)(i). These changes to the relevant text are consistent with the original intent for the conditions.

The language of the relevant conditions would still generally reflect the language in the initial permit, with the simplifying clarification that the "control measures" identified in the recordkeeping provisions are now being addressed in lieu of "established control measures."³⁰ In addition, the recordkeeping requirements for the "Control Measures Record" would be set out in more detail elsewhere in the permit to ensure both additional enforceability and consistency with settlement discussions regarding the nature of this required record. (See revised Conditions 7.2.9(b)(i) and 7.3.9(b)(i).)

Condition 7.2.6(b)

Changes are planned to this condition, which relates to permit limits established by Construction Permit 90070073. In the project addressed by that permit, the source added equipment to enable it to reduce the handling of coal at the coal pile with bulldozers and other mobile equipment. The equipment that was added included additional coal conveyors and coal stacking tubes. In the 2005 permit, changes were made to the limits in the construction permit using T1 authority to simplify the applicable permit limit for emissions, replacing hourly and annual limits for PM emission from three groups of new equipment with a single annual emission limit of 65 tons/year. The source has confirmed that a limit of 65 tons/year is far in excess of actual emissions, and that a lower limit of 20 tons/year for this equipment is more appropriate. Consequently, Illinois EPA plans to lower the limit to 20 tons/year. To provide practical

²⁹ The emissions of the subject operations are currently such that compliance might be unaffected by an interruption or lapse in the implementation of the control measures for an operation. It would be incorrect to assume that such an interruption or lapse would result in an exceedance of the applicable emission limits for an operation.

³⁰ The use of the term "established" in the initial permit to describe the control measures is likely redundant and potentially confusing. This is because the permit requires the source to keep records identifying these control measures. Those records would necessarily reflect those measures selected or established by the Permittee for the subject units.

enforceability, this limit would now be accompanied by operational limits for the total amount of coal handled, rather than limits on the hourly throughput of the groups of new equipment. A limit would also be added for the PM emission rate of the new equipment in pounds per ton of coal handled.

Conditions 7.2.7(a), 7.2.8, 7.3.7(a) and 7.3.8

The revised permit would generally make various corrections and adjustments to the requirements for opacity observations and for inspections for the coal handling and processing operations. The objective was to maintain continuity with the initial permit and not alter the basic approach taken for these requirements.³¹ At the same time, the Illinois EPA recognized the need to reconcile a revised permit secured through a negotiated settlement with changes to certain requirements in the initial permit. On balance, the changes are consistent with the Periodic Monitoring required by the initial permit, strengthening the robustness of the overall approach.

The initial CAAPP permit provided for Periodic Monitoring for these emission units through a variety of requirements. As already discussed, one aspect of these requirements was the use of control measures. This requirement is analogous to requirements under certain state rules and certain New Source Performance Standards.³² Those rules generally require a subject source to identify best management practices or good engineering practices to reduce emissions of subject emission units as may be needed or as appropriate for site-specific conditions. Within the regulatory framework, subject sources retain considerable latitude in selecting the type and suitability of control measures relative to circumstances that directly bear upon the usefulness and/or performance capabilities of those measures. Such flexibility enables sources to appropriately address varying site conditions, mode of operation and changes in the characteristics of materials.

Conditions 7.2.7(a), 7.2.8, 7.3.7(a) and 7.3.8 set forth actions that the source must take to confirm implementation of control measures and assure compliance with applicable emission standards. For example, for coal handling operations, Conditions 7.2.7(a) and 7.2.8 set forth requirements for opacity observations and for operational inspections, respectively. The combination of requirements in these conditions and in other conditions satisfies the need for

³¹ The initial CAAPP permit established a comprehensive regimen for Periodic Monitoring for the subject operations and processes. In its consideration of Periodic Monitoring for these emission units, it was recognized that varying combinations of components could serve to establish sufficient periodic monitoring, depending upon the nature of the subject equipment and the applicable emissions control requirements. In the case of the coal handling and processing, this consideration necessarily accounted for the type, function, placement and locations of these units and the straight-forward nature of the emission standards that apply to these units. See, Response to Public Comments for CAAPP Permit Applications for Midwest Generation et al, at 33 (September 29, 2005) ("these requirements need not be identical for each unit" and "various combinations of the requirements will suffice depending on the nature of a unit and the emission control requirements to which it is subject.").

³² See, 35 IAC 212.309, Operating Program. See also, 40 CFR 60 Subpart Y, New Source Performance Standards for Coal Preparation Plants and Processing Plants.

Periodically Monitoring for coal handling operations to assure compliance. For the subject operations, the initial permit required opacity observations by Method 9 at least annually (i.e., a minimum of five observations during the five-year permit term). The initial permit also required inspections of these emission units at least monthly to confirm proper functioning of control measures. These inspections were required to be performed by personnel "not directly involved" in day-to-day operation. The Permittee appealed these conditions on various grounds. These included the contention that inspections should be conducted or overseen by qualified personnel who possess the requisite knowledge, experience and training to conduct inspections in a safe manner.

The revised permit would change requirements for observations for opacity and visible emissions for the coal handling and processing. The changes adjust the number of required opacity observations and add requirements for observations of visible emissions. If visible emissions are present based on observations for visible emissions using Method 22, the Permittee can either take corrective action within a designated two-hour period or conduct a follow-up observation for opacity using Method 9. Observations for the presence of visible emissions, consistent with Method 22, are now required on an annual basis, in place of the annual opacity observations by Method 9 that were previously required.^{33, 34} In these observations for visible emissions, the observer will determine the presence or absence of visible emissions. Method 22 observations must now be conducted annually, with observations for some operations conducted during the monthly inspection of the subject operations. If visible emissions are present, as determined by observations in accordance with Method 22, the source can either take corrective action within two hours or conduct follow-up Method 9 observations to determine the level of opacity.³⁵ These conditions

³³ Method 22 involves observations for a period of time, with the duration of observation either set by the applicable regulatory or permit provision, with a minimum observation period of one minute required by the text of Method 22. While Method 22 was initially developed to determine the frequency or duration of visible emissions during the operation of an emission unit, it may also be adapted for use to determine the presence of visible emissions, as provided by 35 IAC 212.107. Unlike opacity observations by Method 9, a person making observations for visible emissions by Method 22 does not have to be "certified" to be qualified to make such observations. The observer must only be knowledgeable about the various conditions that may affect the visibility of emissions, either through review of appropriate written training materials or by attending the lecture portion of a Method 9 certification course, commonly referred to as "smoke school".

³⁴ Unlike Method 22, Method 9 entails making a numerical determination of the opacity of emissions, as a percentage. In Method 9, a human observer makes an instantaneous determination of opacity every 15 seconds for a set period, with the value of opacity being the average of a set of observations. Method 9 includes procedures and specifications for training and periodic certification of individuals who may authoritatively conduct observations of opacity.

³⁵ A further explanation follows for how monitoring would occur under the revised permit, using a conveyor for purposes of discussion. At least one monthly inspection of the control measures on the conveyor each year must now include observations for visible emissions by Method 22. Follow-up observations for opacity by Method 9 would then be required if visible emissions are present and the source cannot complete corrective actions to eliminate the visible emissions within two hours. Thus, the

also allow observations for opacity to be directly conducted by Method 9 for an emission unit without first conducting observations for visible emissions by Method 22.³⁶

Although certain aspects of the Periodic Monitoring for the subject operations would change, the basic components, including regular inspections, periodic observations, recordkeeping and reporting, remain the same. More importantly, the overall approach to periodic monitoring would be strengthened due to the overall increase in the frequency of required inspections and observations.³⁷

It should also be understood that the use of control measures for the subject units is required independently of the inspections and observations of these units that are required by the permit. Lapses in the use of such measures must be corrected by the source independent of the required inspections. Because the collective requirements relating to control measures should be adequate to verify use of the control measures, more frequent inspections are not necessary to provide Periodic Monitoring that satisfies the requirement of Title V of the Clean Air Act.³⁸

Various changes would be made in the revised permit to the conditions that set forth the requirements for observations for visible emissions/opacity and for inspections for the handling and processing of coal. The changes that constitute significant modifications to provisions of the initial permit are discussed below.³⁹

In Conditions 7.2.7(a) (i) and 7.3.7(a) (i), the phrase "representative weather conditions" would be removed to avoid a potential conflict between the language

requirement for observations for visible emissions could result in as many as five opacity observations for the conveyer during the five-year term of the permit (one each year). In addition, the revised permit also requires that two observations specifically for opacity be conducted during the term of the permit. Accordingly, the revised permit requires a minimum of at least two opacity observations and could require as many as seven opacity observations during the term of the permit. In contrast, the initial permit only required five opacity observations for the conveyer over the term of the permit.

³⁶ For certain operations, the Illinois EPA anticipates that the Permittee will choose to immediately undertake observations for opacity to confirm compliance with the opacity standard. This is because, for those operations, some level of visible emissions or opacity may be present and there simply may not be any corrective action that could be implemented to eliminate such emissions.

³⁷ It should be recognized that adequate Periodic Monitoring could be provided for these operations by combinations of requirements that apply on schedules or are subject to triggers that are different than those specified in the revised CAAPP permit.

³⁸ Formalized inspections of the coal handling equipment and coal processing equipment are required monthly pursuant to Conditions 7.2.8(a) and 7.3.8(a), respectively. It is also expected that visible emissions will normally not be present for a number of other pieces of equipment. The transfer point from the railcar loading pit to the coal transfer conveyor is located underground.

³⁹ Other changes that would be made to clarify or correct these conditions, as would be made by administrative amendment or by minor modification, respectively, are discussed in Attachments 1 and 2, which accompany this Statement of Basis.

of the permit and Method 9 with respect to the performance of opacity observations. These observations must be conducted using Method 9, which specifies acceptable weather conditions during which opacity observations can be conducted. The phrase during "representative weather conditions" in the condition could potentially be construed to require opacity observations be made during weather conditions that would be inconsistent with use of Method 9.

Conditions 7.2.7(a) and 7.3.7(a) require the source to conduct certain "mandatory" observations for opacity in accordance with Method 9 for all subject units to authoritatively address compliance with 35 IAC 212.123. In light of other changes to the requirements for subject units, the deadlines in Conditions 7.2.7(a)(i)(A) and 7.3.7(a)(i)(A) for initially completing these mandatory opacity observations would be changed from three months to two years after the effectiveness of these conditions. Conditions 7.2.7(a)(i)(B) and 7.3.7(a)(i)(B) now require subsequent mandatory opacity observations to be conducted every three years, rather than annually. These changes were made because the requirements for regular inspections of these units in Condition 7.2.8 and 7.3.8 would now provide for opacity observations to be conducted at least annually in conjunction with those inspections in circumstances where it is appropriate, i.e., if visible emissions are observed and the source does not expeditiously take actions to eliminate those visible emissions.

Conditions 7.2.7(a)(iii) and 7.3.7(a)(iii) require the source to notify the Illinois EPA at least 7 days in advance of the mandatory opacity observations required by Conditions 7.2.7(a)(i) and 7.3.7(a)(i), as discussed above. The initial CAAPP permit required the source to notify the Illinois EPA for the observations for each individual emission unit when it conducts a "set of observations" for a group of emission units. Submittal of multiple notifications in such circumstances would have been unnecessary and unreasonable. The conditions would be changed so that if the source will be conducting a set of observations for a group of units, the source must only notify the Illinois EPA in advance of the observations for the first unit.

After completion of required opacity observations for a unit or group of units, as discussed above, the source is required to submit a written report to Illinois EPA pursuant to Conditions 7.2.7(a)(v) or 7.3.7(a)(v). The initial permit required these reports to be submitted within 15 days of the date of observations. The Permittee appealed these conditions and in settlement discussions argued that the timing was unreasonable and should be extended to be consistent with other similar types of reporting requirements.

In the initial permit, Condition 7.3.7(b) provided for testing of the PM emissions of the affected processes upon request from the Illinois EPA. The Permittee appealed this condition on the grounds that the coal crushers did not discharge through stacks or vents and should not be subject to emission testing requirements intended for stack or non-fugitive emissions.

It was recognized in settlement discussions that these coal processing units do not exhaust through stacks and that it would be not practical to directly

measure emissions of those units because exhaust flow rate cannot be properly measured.^{40, 41} Therefore, Condition 7.3.7(b) would be removed from the permit.

The revised permit would now provide that these reports must be submitted within 30 days. These reports would address the mandatory opacity observations that are required for these emission units over the term of the permit. Importantly, these observations are required to be conducted during "representative operating conditions." This requires that these observations be conducted when an operation is actually handling material.⁴² It also requires that these observations be conducted when an operation is being used or is functioning as it is normally used or functions. Finally, it requires that the control measures for the operation be implemented in the manner that they are normally implemented. Accordingly, it is very unlikely that these reports will ever provide information for which the effort associated with submittal of reports in 15 days is warranted.

Conditions 7.2.8(a) and 7.3.8(a) require the source to conduct formal inspections of the subject units on a regular, monthly basis. (As will be discussed later, the revised permit would also require visual surveys of the coal storage pile to be conducted twice monthly during the warmer seven months of each year.) This frequency for the formal inspections that are required as part of the Periodic Monitoring for the subject operations is reasonable. The coal handling and coal processing operations have a history of compliance. The control measures that address emissions from the units are robust. That is, they are not easily interrupted or damaged. They are also not at risk of upsets if their operation is not closely tracked. The operation and performance of these operations and their control measures is also directly apparent to the staff that operate them on a day to day basis as part of the receiving, handling and storage of material. The required frequency of inspections is consistent with the standard requirement for compliance inspections for these

⁴⁰ Periodic Monitoring for those units without stacks or vents is appropriately addressed with requirements for periodic observations and inspections. In this regard, it should also be noted that the revised CAAPP permit continues to apply 35 IAC 212.123, the general state standard for opacity, to the subject operations. In its appeal, the Permittee claimed that this standard should not be applicable because these operations emit "fugitive particulate matter" for purposes of 35 IAC Part 212, Illinois' standards for Visible and Particulate Matter Emissions. However, 35 IAC 212.123 is applicable. For example, 35 IAC 211.2490, the definition of fugitive particulate matter, specifically provides that the absence of a stack on an emission unit does not exempt the unit from provisions in 35 IAC Part 212 that would otherwise be applicable.

⁴¹ For units with vents or stacks, it may also be impractical or unreasonable for emission testing to be conducted on certain units for a variety of reasons. For example, the unit may operate intermittently, the configuration of the duct work may not provide a suitable location for sampling, the exhaust flow rate may be too low for reliable measurement, or the location of the ductwork or the stack would pose unacceptable safety risks for personnel if testing were attempted.

⁴² This equipment will operate on a regular basis, although most of the equipment operates intermittently. For instance, based on available information, the unloading of silos and reclamation of coal from the storage pile occurs roughly 6 hours per day.

types of operations in the NSPS for Coal Preparation Plants, 40 CFR 60 Subpart Y.⁴³

More frequent inspections of the material handling operations would obviously provide additional confirmation that the subject operations are being properly operated and specified control measures are being implemented. However, this is not a sufficient basis for mandating more frequent inspections as part of the Periodic Monitoring for the subject operations.⁴⁴

The revised permit would no longer require that these inspections of these units to be conducted by personnel who are "... not directly involved in the day-to-day operation." Instead, these inspections must be overseen by management or supervisory personnel, who must sign off on these inspections. This addresses the Permittee's concern that it be able to have appropriate personnel, who possess the requisite knowledge, experience and training, conduct these inspections. It still addresses the concern, as reflected in the

⁴³ Under the NSPS for Coal Preparation Plants, 40 CFR 60 Subpart Y, for a subject facility that is subject to an opacity standard and is not controlled with a scrubber, 40 CFR 60.255(b)(2) provides that after the initial performance test or observations for opacity are conducted for new coal handling operation subject an opacity standard, periodic observations of opacity must be conducted as follows. The new facilities that are subject to these requirements are subject to an NSPS opacity standard of 10 percent, six-minute average, pursuant to 40 CFR 60.254. Accordingly, the criterion for periodic observations of opacity on a quarterly basis would be half of 10 percent, or 5 percent.

For each affected facility subject to an opacity standard, an initial performance test must be performed. Thereafter, a new performance test must be conducted ...

(i) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test must be conducted within 90 operating days of the date that the previous performance test was required to be completed.

(ii) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test must be conducted within 12 calendar months of the date that the previous performance test was required to be completed.

Daily observations for visible emissions and use of a digital opacity monitoring for subject facilities are not mandated by 40 CFR 60 Subpart Y. Rather 40 CFR 60.255(f)(1) and (2) provides that the owner or operator of a subject facility may elect to monitor a subject operation using one of these approaches as an alternative to conducting opacity observations on a quarterly or annual basis, as appropriate.

⁴⁴ More frequent observations for visible emissions are not warranted. Neither the applicable standards nor the permit prohibit visible emissions from the subject units. For purposes of Periodic Monitoring, the absence of visible emissions is a criterion that will act to simplify the periodic inspections for certain units, such as the coal crushers which are located in a closed building. For such equipment, the absence of visible emissions will likely readily confirm proper implementation of control measures. If visible emissions are not present from such unit, either during initial observations for visible emissions or following timely repair, it would also be unproductive to require observations for the opacity of emissions by Method 9, as are necessary for units from which visible emissions are normally present.

provisions of the initial permit, that these inspections be conducted in a manner that serves to confirm proper use of control measures separate from the routine actions taken by operational personnel on a day-to-day basis. This would be provided for by the revised conditions as they provide that management or supervisory personnel must sign off on these inspections, thereby taking on responsibility for these inspections if they are performed by other personnel.

Other changes would be made to clarify and simplify these conditions. For example, the conditions now provide that if a unit is not in operation during an inspection, this shall be noted in the records for the inspection.

New Conditions 7.2.8(b) and 7.3.8(b)

In the revised CAAPP permit, new Conditions 7.2.8(b) and 7.3.8(b) address observations for visible emissions and/or opacity that must now be conducted in conjunction with inspections of the subject units. As already discussed, the revised permit would require the source to conduct observations for visible emissions and/or opacity in conjunction with the inspections of the subject units, so that observations are conducted for each subject unit at least once during each calendar year. Other requirements for these observations are also addressed by these new conditions. For example, these conditions provide that the observations for visible emissions must be conducted in accordance with 35 IAC 212.107, Measurement Methods for Visible Emissions. This provides an appropriate linkage in state rule to Method 22. In addition, 35 IAC 212.107 specifies a minimum duration, one minute, for observations for visible emissions from an emission unit. These conditions also explain that the purpose of these observations is to determine compliance with the applicable opacity standard, 35 IAC 212.123. These conditions also confirm that advance notice to the Illinois EPA is not required for these observations, unlike the opacity observations required by Conditions 7.2.7(a) and 7.3.7(a).

Initial Conditions 7.2.8(c) and 7.3.8(c) (Condition in the initial permit)

These conditions required the source to conduct inspections of pollution control devices while they are out of service, as needed to address the condition of the internal components of these devices. Since Joppa utilizes dust extractors, and not baghouses, for control of PM emissions from coal handling and processing operations, an internal inspection is unnecessary to ensure proper operation. These conditions requiring internal inspections of control devices would therefore be removed from the permit. Periodic inspections of the dust extractors would be required under Conditions 7.2.8(a) and 7.3.8(a).

Planned New Condition 7.2.8(c)

"New" Condition 7.2.8(c) in the draft permit would impose an additional compliance requirement for the coal storage pile at Joppa. This requirement responds to concerns about the effect of weather on the emissions of coal handling operations, as expressed in public comments on drafts of revised CAAPP permits for certain other coal-fired power plants in Illinois. During warmer weather, May through November of each year, the planned revised permit would require the source to conduct a visual survey of these operations twice a

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month. Each survey must include either an observation for visible emissions or for opacity. For the storage pile operations, this provision addresses the potential role of weather, as mentioned in the public comment, in the emissions of the storage piles and the control measures that are implemented. During warm weather, water evaporates more quickly and the exposed coal at the surface of a pile will dry, reducing its natural moisture content and increasing its potential for emissions.⁴⁵ For material handling operations other than the coal storage piles, the material is not exposed to the open air for an extended period of time at the source so that drying has, at most, a minimal effect on emissions.

In other respects, the frequency of the formal inspections that is required as part of the Periodic Monitoring for the subject operations is reasonable. With regard to the coal handling and coal processing operations, these operations have a history of compliance. They operate with a substantial margin of compliance. The control measures that address emissions from the units are robust. That is, they are not easily interrupted or damaged. They are also not at risk of upsets if their operation is not closely tracked. The operation and performance of these operations and their control measures is also directly apparent to the staff that operate them on a day to day basis as part of the receiving, handling and storage of material. The required frequency of inspections is consistent with the standard requirement for compliance inspections for these types of operations in the NSPS for Coal Preparation Plants, 40 CFR 60 Subpart Y.

Conditions 7.2.9(b) (i) and 7.3.9(b) (i)

The CAAPP permit requires the Permittee to create and maintain a list of various control measures being implemented,⁴⁶ which are generally described in the permit⁴⁷ and to notify the Illinois EPA of revisions to the list.⁴⁸ As already discussed, associated requirements for inspections and recordkeeping are designed to ensure that the control measures are being implemented.⁴⁹ The combination of these requirements for control measures, inspections and recordkeeping establish the permit's approach to Periodic Monitoring for the subject units. The Illinois EPA established the use of control measures to facilitate Periodic Monitoring for the subject operations. Developed as work practice standards in the initial permit and retained in the negotiated revisions to the permit,⁵⁰ the use of control measures was deemed appropriate

⁴⁵ This provision is considered appropriate as the source indicated that secondary control measures may be used for the coal storage pile "when handled coal is unusually dry."

⁴⁶ See, Conditions 7.2.9(b) and 7.3.9(b).

⁴⁷ See, Condition 7.2.1, and Conditions 7.3.1 and 7.3.2.

⁴⁸ See, Conditions 7.2.9(b) (iii) and 7.3.9(b) (iii).

⁴⁹ See, Conditions 7.2.8 and 7.2.9 and Conditions 7.3.8 and 7.3.9, respectively.

⁵⁰ As previously noted, the requirements for control measures in the revised CAAPP permit are substantially identical to those contained in the initial CAAPP permit. Many of the changes being made to these conditions reflect minor changes to the language and do not alter the substantive elements relating to control measures.

as one component of Periodic Monitoring for the subject units.⁵¹ This requirement provides a reliable means of verifying compliance with the emission standards that apply to these units.⁵² The legal basis for the control measures is derived from the authority of Section 39.5(7)(a) of the Act but does not stem from applicable requirements expressly derived from underlying regulations.

The Illinois EPA's approach to Periodic Monitoring for the subject units is similar to the regulatory approach commonly taken for these types of units, as already mentioned. The Illinois EPA opted against a formal approval process for the selected control measures, or for subsequent changes to the list of established control measures. In the absence of underlying regulatory requirements in federal or state law, mandating these additional requirements is unnecessary given the limited purpose meant to be served by the control measures (i.e., periodic monitoring).⁵³ The revised CAAPP permit, like the initial permit, requires the source to keep a list of the control measures that will be operated and maintained for the subject units and to submit a copy of this record to the Illinois EPA. The initial "Control Measures Record" for Joppa was submitted to the Illinois EPA on November 7, 2016.

Conditions 7.2.9(b) (ii) and 7.3.9(b) (ii)

These conditions require the source prepare demonstrations with its records for the control measures that are used for the subject units to show that these measures are sufficient to assure compliance with any applicable standards and permit limits for PM emissions. Changes would be made to these conditions to more clearly indicate that these demonstrations must confirm the operating rates of these units and consider emission factors for controlled PM emissions, as well as the combination of emission factors for uncontrolled PM emissions and data for the efficiency of the control measures that are used. These conditions would also provide for use of emission factors that are published by credible sources in addition to USEPA. The changes reasonably develop the information that may be considered in preparing these demonstrations.

⁵¹ The Illinois EPA acknowledged this reasoning in the Responsiveness Summary accompanying the issuance of the initial CAAPP permit, observing that it was requiring the on-going implementation of the work practices and that, together with inspection and recordkeeping, the requirements will assure compliance with periodic monitoring. See, Response to Public Comments for CAAPP Permit Applications for Midwest Generation *et al*, at 33 (September 29, 2005).

⁵² See, Conditions 7.2.4 and 7.3.4.

⁵³ In addition, an attempt to impose such requirements would potentially raise questions of legal authority, as federal courts have recognized the general principle that Title V permitting authorities may not create new substantive requirements. To replicate, through a Title V permit, principal elements of a regulatory program that could not otherwise be imposed on a source as an applicable requirement would likely exceed the scope of gap-filling and/or other implied authorities available to Title V permitting agencies. It can be noted that the Illinois EPA will be reviewing relevant material generated by the permit (e.g., record of control measures) to ensure, for purposes of any future permit action, that the use of control measures being implemented by the source is consistent with applicable permit requirements.

Conditions 7.2.9(b) (iii) and 7.3.9(b) (iii)

As already discussed, Condition 5.6.2(d) in the initial CAAPP permit, which specifically addressed the submittal to the Illinois EPA of the lists of control measures required by conditions in Section 7 of the permit, is no longer in the revised permit. The relevant details for the submittal of those records, as had been addressed by Condition 5.6.2(d), are now addressed in Conditions 7.2.9(b) (iii) and 7.3.9(b) (iii). In the initial permit, these conditions only included a cross-reference back to Condition 5.6.2(d).

Conditions 7.2.9(c)

This condition regarding operating records would be revised to clarify that the Permittee would only need to keep records of the amount of coal and other solid fuels received. The amount of coal and other fuels sent to the outdoor storage piles was not necessary because there were no specific limitations in the permit that warranted the need for such records.

Conditions 7.2.9(d) and 7.3.9(c)

These conditions, which address the recordkeeping required for the periodic inspections of the subject units, would be revised to remove unnecessary recordkeeping requirements and clarify recordkeeping requirements for the inspections. In particular, separate records would no longer be necessary for the equipment inspections of the dust collection equipment because the source does not use baghouses as previously discussed.

Conditions 7.2.9(e) and 7.3.9(d)

These conditions would be revised to better delineate required recordkeeping and to reference the control measures record. In addition, due to the addition of Conditions 7.2.3(b) and 7.3.3(b), these conditions would be revised to include the additional recordkeeping requirements when an affected operation or process continued to operate during malfunction or breakdown with excess emissions or excess opacity.

Conditions 7.2.9(e) (vii) and 7.3.9(d) (vii)

These conditions in the initial permit would not be carried over into the revised permit. These conditions would have required records of certain information be kept for lapses in use of control measures. The information that is specified is not required to be kept for deviations. In addition, for material handling operations, the effort to generate this information would be excessive compared to the potential benefit that would result from such information.

Condition 7.2.10(a) & (b) and 7.3.10(a) & (b)

Due to the addition of Conditions 7.2.3(b) and 7.3.3(b), notification and reporting requirements for continued operation of the coal handling and processing operations during malfunctions and breakdowns would be added to these conditions. Under these added provisions, the source would be required to immediately notify Illinois EPA of incidents when the opacity from an

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affected operation exceeds 30 percent for eight or more six-minute averaging periods (unless the source has begun to shut down the operation by that time).

Conditions 7.2.10(a) and 7.3.10(a) involve reporting requirements in the case of continued operation of the subject operations and processes with excess emissions during malfunctions and breakdowns. The conditions require the source to provide certain notifications and reports to Illinois EPA concerning incidents when operation continued with excess emissions, including malfunction or breakdown.

The source must report all such incidents in its quarterly reports under Conditions 7.2.10(b)(ii) and 7.3.10(b)(ii). In addition, the source must immediately notify the Illinois EPA of such incidents when the opacity from a subject operation or process exceeds 30 percent for a certain number of 6-minute averaging periods (unless the source has begun to shut down the operation or process by that time).

Section 7.4: Gasoline Storage Tank

Condition 7.4.8

The condition would be revised to allow the Permittee to conduct the annual inspection of the storage tank not later than May 1st of each calendar year instead of the time period of March 1 through April 30th. This would allow the Permittee more flexibility in scheduling the inspection, while still performing the inspection prior to the annual ozone season. Other wording changes were made to the condition for clarity and consistency.

Section 7.6: Fly Ash Handling Equipment

Fly ash handling for the Joppa Power Station, which is conducted by Met-South, Inc., is currently separately permitted from the power station. It is planned that fly ash handling would now be addressed in the CAAPP permit for the Joppa Power Station, with new Section 7.6 added to the permit, as discussed below.

Condition 7.6.1

New Condition 7.6.1 would describe the fly ash handling equipment.

Condition 7.6.2

New Condition 7.6.2 would list emission units and air pollution control equipment involved in handling fly ash at Joppa. This equipment includes fly ash conveying and storage systems, dry fly ash loadout, a fly ash batch mixer and conditioned ash loadout systems. Emission control equipment includes dust collection devices, dust suppression, enclosures, covers, and enclosed load out chute.

Condition 7.6.3

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New Condition 7.6.3(a) would describe the "affected units" addressed by new Section 7.6 of the permit.

New Condition 7.6.3(b) would address continued operation of these affected units with excess emissions during malfunction and breakdown. Electric Energy, Inc. requested that fly ash handling operations be provided with authorization to continue operations in the event of malfunction or breakdown, in accordance with 35 IAC Part 201 Subpart I. The authorization was requested for the opacity standard (35 IAC 212.123) and the process weight rate standard (35 IAC 212.321). The circumstances are similar to those for the coal crushers, as would be addressed in planned new Condition 7.3.3(b). This provision would also be accompanied by appropriate recordkeeping and reporting.

Condition 7.6.4

New condition 7.6.4 would address the applicable emissions standards that apply to the fly ash handling operations, including standards for fugitive emissions, opacity of emissions and process weight rate limitations.

Condition 7.6.5

New Condition 7.6.5 would address non-applicability of the CAM rule.

Condition 7.6.6

New Condition 7.6.6(a) would address control measures for emissions from fly ash handling operations. The provisions would be similar to the provisions for control measures for coal processing operations in Condition 7.3.6(a).

New Condition 7.6.6(b) would address permit limits from Construction Permits 09020049 and 93070073 for the operation and emissions of the fly ash handling equipment would be addressed. These permit limits would be simplified, using T1 authority, so only PM emissions would be explicitly limited. This is because the limits for PM emissions would act to ensure that the combined PM₁₀ emissions from the projects addressed by those permit are also below 15 tons/year, the PSD significant emission rate for PM₁₀.

Condition 7.6.7

New Condition 7.6.7 would address requirements for opacity observations and emissions testing. The provisions would be similar to those for coal processing equipment in Conditions 7.3.7.

Condition 7.6.8

New Condition 7.6.6 would address inspection requirements to confirm compliance with Condition 7.6.6. The provisions would be similar to those for coal processing equipment in Conditions 7.3.8.

Condition 7.6.9

New Condition 7.6.9 would address the recordkeeping required for fly ash handling operations. The provisions would be similar to those for coal processing equipment in Conditions 7.3.9.

Condition 7.6.10

New Condition 7.6.10 would address reporting requirements including deviations and continued operation during malfunction or breakdown would be added. The provisions would be similar to those for coal processing equipment in Conditions 7.3.10.

Condition 7.6.11

New Condition 7.6.11 would address operational flexibility for the fly ash handling operations, including providing for operation of additional dust control measures or replacement of existing measures would be added. The provisions would be similar to those for coal processing equipment in Conditions 7.3.11.

Condition 7.6.12

New Condition 7.6.12 would summarize the compliance procedures that apply for the fly ash handling operations.

Changes in Section 9: Standard Permit Conditions

Condition 9.3

The wording of Condition 9.3 would be revised to match the language in Sections 4(b), 39.5(7) (a), and 39.5(7) (p) (ii) of the Act.

CHAPTER 4 - PLANNED CHANGES TO THE CAAPP PERMIT THROUGH REOPENING

Introduction

The changes described below are planned to be made as part of the reopening proceeding for the CAAPP permit for Joppa.⁵⁴

Changes in Section 2 of the Permit: List of Abbreviations and Acronyms used in this Permit

Condition 2.0

Additional abbreviations and acronyms that would be used in the revised CAAPP permit would be added to Condition 2.0, including ACI (Activated Carbon Injection), BART (Best Available Retrofit Technology), CAIR (Clean Air Interstate Rule), CEMS (Continuous Emission Monitoring System), CMS (Continuous Monitoring System(s)), CSAPR (Cross-State Air Pollution Rule), dcfm (dry cubic feet per minute), DSI (Dry Sorbent Injection), FGC (Flue Gas Conditioning), Gal (Gallon), GWh (Gigawatt-Hour), ILCS (Illinois Compiled Statutes), LNB (Low NOx Burners), LP (Liquid Propane), MACT (Maximum Achievable Control Technology), MATS (Mercury And Air Toxics Standards), MWh (Megawatt-Hour), NESHAP (National Emission Standards for Hazardous Air Pollutants), ORIS (Office of Regulatory Information System), OFA (Over-Fire Air), PM CPMS (Particulate Matter Continuous Parametric Monitoring System), PM_{2.5} (Particulate Matter_{2.5}), RATA (Relative Accuracy Test Audit), RICE (Reciprocating Internal Combustion Engine), RMP (Risk Management Plan), TBtu (Trillion Btu) and TR (Transport Rule), T1 (Title I - identifies Title I conditions that have been carried over from an existing permit), T1N (Title I New - identifies Title I conditions that are being established in this permit), and T1R (Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit).

Also, the description of "AP-42" would be revised for clarification and to specify the Supplements to AP-42.

Changes in Section 3 of the Permit: Conditions for Insignificant Activities

Condition 3.1.1

The Hydrochloric Acid Tank, currently addressed in Section 7.5 of the permit, would now be identified as an insignificant activity. This is because emissions from this tank meet the criteria for an insignificant activity in 35 IAC 201.210.211. As a result, all conditions in Section 7.5 of the initial permit would be removed and the revised permit would indicate that Section 7.5 is "Intentionally Blank."

Condition 3.1.2

⁵⁴ Pursuant to Section 39.5(14)(c) of the Act, "Proceedings regarding a reopened CAAPP permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists."

Activated carbon storage silos with bin vent filters would be added to the list of insignificant activities.

Condition 3.1.3

The descriptions of categories for insignificant activities were revised for clarity and to more closely follow regulatory language. Storage of oils and other materials in drums as allowed by 35 IAC 201.210(a)(8) would be added to this condition.

Condition 3.2.1 and 3.2.3

References to 35 IAC Parts 218 and 219 would be removed from these conditions since they apply to geographic locations (Chicago and the Metro East Areas) which do not apply to the location of Joppa Power Station.

Condition 3.4

This condition would be added to set forth the requirements for an emergency generator powered by a 230-bhp, spark injected, liquid propane (LP) fueled engine which is an insignificant activity. The generator was installed in 1987 and is subject to the NESHAP for Stationary Reciprocating Internal Combustion Engines, 40 CFR Subpart ZZZZ, in addition to state standards for opacity of emissions and SO₂ emissions. Since it is an "emergency engine" as defined at 40 CFR 63.6675, it is only subject to restrictions on operating hours and work practices under the NESHAP.

Changes in Section 5.0: Overall Source Conditions

Condition 5.1.3

The source is considered a single source with Midwest Electric Power, Inc., at 2200 Portland Road, Joppa (Illinois EPA ID No. 127899AAA). Midwest Electric Power has five natural gas-fired turbine-generators that are used to provide peaking electrical power. Midwest Electric Power was issued a CAAPP permit on May 17, 2001 (Permit 01050058). While that CAAPP permit was renewed on March 19, 2009, the renewed permit was appealed to the Board. Settlement discussions are currently underway to resolve that appeal. The fact that the Midwest Electrical Power facility is considered a single source with the Joppa Power Station would be addressed in Condition 5.1.3 of the revised CAAPP permit, which addresses applicability of CAAPP to a source. In the initial permit, this facility is addressed in Condition 1.4, which provides a general description of the source that is the subject of a permit.

The source is also considered a single source with Joppa Refined Coal, located at 2100 Portland Road, Joppa (Illinois EPA ID No. 127015ABE). Joppa Refined Coal operates a facility to receive and apply fuel additives to the coal used at the Joppa Power Station to lower emissions of NO_x and mercury. Joppa Refined Coal has submitted an initial application for a CAAPP permit, which is currently pending with the Illinois EPA (Application No. 14060030).

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Condition 5.2.2(a) (ii)

This condition would be added to require the Permittee to conduct observations at the source property line for visible emissions of fugitive particulate matter from the source to address compliance with 35 IAC 212.301, upon request of the Illinois EPA.

Changes in Section 6.0: Conditions for Emissions Control Programs

Section 6.1 NO_x Trading Program

Section 6.1 would be removed from the permit because the NO_x Trading Program addressed by 35 IAC 217 Subpart W no longer exists.⁵⁵ The requirements under the program expired in 2009.

Section 6.3 Cross-State Air Pollution Rule

On July 6, 2011, the USEPA finalized the rule known as the Cross-State Air Pollution Rule (CSAPR). CSAPR requires states to significantly improve air quality by reducing power plant emissions that contribute to ozone and/or fine particle pollution in other states⁵⁶.

CSAPR requires a total of 28 Eastern and Midwestern states to reduce annual SO₂ emissions, annual NO_x emissions and/or ozone season NO_x emissions to assist in attaining the 1997 ozone and fine particle and 2006 fine particle National Ambient Air Quality Standards (NAAQS). CSAPR took effect January 1, 2015 for SO₂ and annual NO_x, and May 1, 2015 for ozone season NO_x.

CSAPR includes several emissions trading programs that require affected EGUs to hold emission allowances sufficient to cover their emissions of nitrogen oxides (NO_x) and/or sulfur dioxide (SO₂) in each compliance period. For each trading program and compliance period, the rule establishes overall state "budgets" representing the maximum number of emission allowances that may be allocated to the group of affected EGUs in each covered state. Annual SO₂ allocations for the six affected EGUs (combined) at Joppa are 18,996 tons per year in 2015 and 2016 and 9,903 tons per year in 2017 through 2020. Annual NO_x allocations for the six affected EGUs (combined) are 3,590 tons per year for the period of 2015 through 2020 and 1,547 tons per ozone season for the same period⁵⁷.

⁵⁵ The NO_x Trading Program has been made obsolete by the USEPA's adoption of the Cross-State Air Pollution Rule (CSAPR).

⁵⁶ The timing of CSAPR's implementation has been affected by a number of court actions. On December 30, 2011, CSAPR was stayed prior to implementation. On April 29, 2014, the U.S. Supreme Court issued an opinion reversing an August 21, 2012 D.C. Circuit decision that had vacated CSAPR. Following the remand of the case to the D.C. Circuit, USEPA requested that the court lift the CSAPR stay and toll the CSAPR compliance deadlines by three years. On October 23, 2014, the D.C. Circuit granted USEPA's request. Accordingly, CSAPR Phase 1 implementation begins in 2015, with Phase 2 beginning in 2017.

⁵⁷ Allocations are from Technical Information and Support Document on USEPA website titled "Unit Level Allocations Under the CSAPR FIPs After Tolling" (http://www3.epa.gov/crossstaterule/pdfs/UnitLevelAllocations_Tolled.xls)

The CSAPR requirements are addressed in detail in Condition 6.3 of the draft of the planned revised permit. The language in the planned revised permit was based on regulatory requirements.⁵⁸

The source submitted an initial compliance certification for CSAPR to USEPA on April 20 2015. These have been followed by periodic compliance reports on a quarterly basis.

Section 6.4 Illinois Mercury Rule

To address mercury emissions from electric generating units (EGUs), Illinois adopted 35 IAC Part 225 "Control of Emissions from Large Combustion Sources." This rule provided two options; one option imposes stringent limits on mercury emissions alone; the other option mandates implementation of specific mercury control technology in conjunction with lower emission limits for SO₂ and NO_x. The Permittee chose the option of stringent limits on mercury emissions.

The Permittee must comply with the following limits as addressed in planned Section 6.4 of the CAAPP permit:

- Mercury: 0.0080 lb mercury/GWh gross electrical output, using continuous monitoring equipment which includes mercury continuous emission monitoring systems and associated monitoring and data acquisition systems.
- NO_x: An MPS Group system-wide annual emission rate and an ozone season of no more than 0.11 lb/million Btu, as shown using continuous emissions monitoring systems.
- SO₂: An MPS Group system-wide annual emission rate of 0.23 lb/mmBtu, as shown using continuous emissions monitoring systems.

As portions of the Illinois mercury rule are awaiting action by USEPA for inclusion Illinois State Implementation Plan (SIP), the relevant emission limits, monitoring, recordkeeping and reporting requirements of 35 IAC Part 225 are depicted in the permit as State-only requirements.

The Permittee has submitted an initial compliance certification for the mercury rule to Illinois EPA, and it has been followed by periodic compliance certifications on a quarterly and annual basis.

Section 6.5 Mercury and Air Toxics Standards (MATS Rule)

On December 16, 2011, the USEPA adopted the National Emission Standards for Hazardous Air Pollutants (NESHAP) from Coal- and Oil-Fired Electric Utility Steam Generating Units, 40 CFR 63 Subpart UUUUU, to reduce emissions of hazardous air pollutants from power plants. Specifically, these NESHAP rules,

⁵⁸ Monitoring plans submitted to the USEPA Administrator can be found at <http://www.epa.gov/airmarkets/emissions/monitoringplans.html>.

more commonly referred to as the mercury and air toxics standards (MATS) for power plants, address HAP emissions from new and existing coal and oil-fired electric utility steam generating units (EGUs). The final rule was effective on April 16, 2012 and allowed existing sources three years to comply with the rule, resulting in an initial compliance date of April 16, 2015.

MATS addresses emissions of heavy metals, including mercury (Hg), arsenic (As), chromium (Cr), and nickel (Ni); and acid gases, including hydrochloric acid (HCl) and hydrofluoric acid (HF). MATS applies to EGUs larger than 25 MW that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public. For existing coal-fired EGUs, the rule establishes numerical emission limits for mercury, non-mercury HAP metals, and HCl (a surrogate for all toxic acid gases).

The rule establishes alternative numeric emission standards, including SO₂ (as an alternate to HCl), individual non-mercury HAP metals (as an alternate to PM), and total non-mercury HAP metals (as an alternate to PM). The standards set work practices, instead of numerical limits, to limit emissions of organic air toxics, including dioxin/furan, from existing and new coal- and oil-fired power plants. Because dioxins and furans form as a result of inefficient combustion, the work practice standards require a triennial performance test program for each unit that includes inspection, adjustment, and/or maintenance and repairs to ensure optimal combustion.

The Permittee has chosen the following approaches to comply with requirements of the MATS Rule:

- **Non-Mercury HAP Metals:** Compliance with the total non-Hg HAP metals limit of 0.000050 lb/mmBtu, as a 30-group boiler operating day rolling average. The source is demonstrating compliance with quarterly emissions testing. (The source has not chosen to use a continuous monitoring system.) Pursuant to the MATS Rule, the source may qualify for low emitting EGU (LEE) status for total non-Hg HAP metals if performance test emissions results are less than 50 percent of the applicable emissions limits for all required testing for 3 consecutive years. If LEE status is achieved, the source will be required to conduct performance testing once every three years.
- **Acid Gases:** Compliance with an HCl limit of 0.0020 lb/mmBtu, as a 30-group boiler operating day rolling average. With this option, quarterly testing for HCl emissions is required.
- **Mercury:** Compliance with a limit of 0.011 lb/GWh, as a 90-group boiler operating day rolling average. Pursuant to the MATS Rule, the Permittee is using a sorbent trap monitoring system to demonstrate compliance with the standard.
- **Work Practices:** Conducting tune-ups of the boiler burner and combustion controls at least every 36 calendar months. The Permittee is complying with the control device operation, fuel usage, monitoring, recordkeeping, and reporting requirements specified in Items 3 and 4 of Table 3 of 40 CFR

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Part 63 Subpart UUUUU during startup periods and shutdown periods of the affected EGUs. For this purpose, the Permittee has elected to use the first definition of startup in 40 CFR 63.10042.⁵⁹

MATS Initial Compliance Demonstrations

As required by the MATS Rule, the Permittee has conducted all required initial performance testing, boiler tune-ups and notifications. All emissions testing demonstrated significant margins of compliance with the applicable emissions limits. The Permittee submitted notices of completion of initial performance tune-up for the boilers to the Illinois EPA as shown in the table below. These have been followed by periodic testing reports on a quarterly basis. The MATS Rule notification of compliance status report was submitted on September 11, 2015.

Boiler	Date of Initial Tune-Up	Date of Notification to Illinois EPA
1	12/3/2014	1/8/2015
2	5/14/2015	6/30/2015
3	5/9/2015	6/30/2015
4	12/4/2014	1/8/2015
5	11/19/2014	1/8/2015
6	12/5/2014	1/8/2015

MATS Compliance Options

The planned revised permit would also allow the Permittee to switch to other compliance options, as provided by the MATS Rule. This would be addressed in planned Condition 6.5.9, which provides that such switches may occur following prior notification to Illinois EPA and applicable performance testing and revisions to the Notification of Compliance Status as necessary.

Section 7.1: Coal Fired Boilers

Condition 7.1.1

The description of the boilers would be updated to reflect currently installed pollution control equipment. Equipment installed on the boilers since 2005 includes activated carbon injection (ACI) systems for control of mercury emissions. The description would also clarify that the boilers are capable of being operated with flue gas conditioning (FGC) systems. The discussion of boiler cleaning residue would be removed since the boilers are not allowed to fire such material because of the non-applicability of the NSPS as stated in Condition 7.1.5(e).

⁵⁹ This definition provides that a startup is "Either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup."

Other minor changes would be made to the description. In particular, the ability of Boilers 1 and 4 to operate at reduced capacity while firing only natural gas would be added to the description.

Condition 7.1.2

New emissions control equipment added to the coal boilers since 2005 would be added to the table, including the ACI and FGC systems. Low NO_x Burners (LNB) would also be added to the description for each boiler to clarify that a LNB is installed on each boiler.

Condition 7.1.4(g) through (i)

These new conditions for the coal boilers would refer to applicable requirements of CSAPR in Section 6.3 of the planned revised permit, the applicable requirements of the Illinois Mercury Rule in Section 6.4 of the revised permit, and the applicable requirements of the MATS Rule in Section 6.5 of the revised permit. Discussions of these requirements are provided above in the discussions for "Changes to Section 6.0".

Conditions 7.1.5(a) (ii) (B) and 7.1.6(c)

Condition 7.1.5(a) (ii) (B) would be updated to include new state SO₂ emission standards based on heat input from liquid fuels. The new rules apply beginning January 1, 2017, but have not been approved into the State Implementation Plan (SIP), therefore they are listed as "State-Only Requirements". Additionally, new state sulfur content limits for liquid fuels would be added in Condition 7.1.6(c).

Conditions 7.1.5(a) (iii) and (iv)

These conditions would be removed from the permit. Condition 7.1.5(a) (iii) provided definitions for what is considered to be the principal fuel being burned should the source choose to change from using coal to another solid, liquid or gas fuel. Condition 7.1.5(a) (iv) provided notifications requirements associated with any change in principal fuel. Since other conditions in the permit address the use of different fuels and what is considered to be the principal fuel being burned in the boilers these conditions were no longer needed in the permit.

Condition 7.1.5(c) through (f)

Non-applicability statements for NSPSs 40 CFR Part 60 Subparts D, Da and CCCC would be added to the permit. This is because these boilers are existing units and have not been modified or reconstructed after relevant trigger dates (NSPS Subpart D and Da) and do not combust any waste (NSPS Subpart CCCC). Non-applicability statements would be also added for NESHAPs 40 CFR Part 63 Subparts DDDDD and JJJJJJ. This is because the boilers are utility boilers subject to MATS.

Condition 7.1.5(k)

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Non-applicability statement to 35 IAC 217 Subpart M would be added because the Permittee is complying with the multi-pollutant standard in 35 IAC 225 Subpart B (Refer to Condition 6.4.3) and is therefore exempt from these requirement in accordance with 35 IAC 217.342(b).

Condition 7.1.6(a) (ii)

A statement that the tune-ups required by the MATS Rule, as would be addressed in Condition 6.6.3(e), satisfy the semi-annual requirement for a combustion evaluation would be added to the condition.

Condition 7.1.6(a) (iii)

A condition would be added allowing a semi-annual combustion evaluation to be postponed if a boiler is off-line during the last 30 days of the semi-annual period. In such circumstances, the combustion evaluation would be required within 30 days after the boiler is brought back on-line. As a result, the source would not have to startup a boiler for the sole purpose of completing a semi-annual combustion evaluation. In addition, the combustion evaluation would be conducted after the period of time in which the boiler was off-line.

Conditions 7.1.8(f) and 7.1.9(b) (iii)

Construction permit (08020070) T1 requirements for monitoring and recordkeeping for the sorbent injection systems would be added. Other requirements in this construction permit were not specifically identified as T1 requirements in the permit because the source is now subject to 35 IAC 225 Subpart B. (Refer to the Section 6.4 to the permit and the associated justification in this Statement of Basis.)

Condition 7.1.9(a) (vii) and 7.1.10-1(a) (iv)

These conditions would be added to specify the additional recordkeeping and notification requirements associated with sulfur content of fuel oil as a result of the addition of Condition 7.1.6(c).

Condition 7.1.9(f)

Recordkeeping requirements for continuous monitoring systems, pursuant to 40 CFR Part 75, as required for the Acid Rain Program and CSAPR would be added.

Section 7.4: Gasoline Storage Tank

Condition 7.4.5(e)

A non-applicability statement concerning applicability for the NESHAP, Subpart CCCCCC would be added.

Section 7.5: Hydrochloric Acid Storage

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The conditions in this section of the initial permit would be removed in their entirety. This is because, as previously discussed, the storage tanks for hydrochloric acid, which is used for neutralization of wastewater, are an insignificant activity. They would now be addressed as such in Condition 3.1.2. Accordingly, the revised permit would indicate that Section 7.5 is "Intentionally Blank."⁶⁰

⁶⁰ For clarity, the new conditions of the permit that would now address handling of fly ash would be addressed in an entirely new section of the permit, Section 7.6.

Chapter 5 - Changes to the Permit Related to Compliance Assurance Monitoring (CAM)

Discussion

In the federal rules for Compliance Assurance Monitoring (the CAM Rule or CAM) 40 CFR Part 64, the requirement for compliance assurance monitoring in accordance with a Compliance Assurance Monitoring Plan (CAM Plan) is addressed separately for the various emission standards and limits that apply to an emission unit for different pollutants. For this purpose, the CAM Rule uses the term "Pollutant Specific Emission Unit" (PSEU) to distinguish an emission unit and a specific pollutant that must be considered when addressing whether a CAM Plan is needed for a unit for a particular pollutant.

In this regard, the coal boilers at Joppa emit a number of regulated pollutants subject to emission standards, including PM, SO₂, NO_x and CO. Under the CAM Rule, these boilers are considered separate PSEUs for each such pollutant. CAM Plans are only required for these boilers as they are PSEUs for emissions of PM. Although these boilers are PSEUs for other pollutants, CAM Plans are not required for other pollutants. For SO₂ or NO_x this is because these boilers qualify for an exemption in the CAM Rule, i.e., continuous emissions monitoring must be conducted for SO₂ and NO_x. For CO, this is because the applicability criteria of the CAM Rule are not met since these boilers do not use add-on control equipment for CO.

As will be discussed further below, emission units at Joppa other than the coal boilers are not required to have CAM Plans for any pollutants. These other emission units either do not meet the applicability criteria to need a CAM Plan or meet an exemption from the need for a CAM Plan.

Changes for CAM in Section 5: Overall Source Conditions

Condition 5.2.7 (Removed)

In the initial CAAPP permit, Condition 5.2.7 required the Permittee to address the CAM Rule, 40 CFR Part 64, in the application for renewal of the permit or upon application for a significant modification of the permit. The current permitting action involves a significant modification of the permit and the CAM Rule is now being addressed for the emission units that are the subject of this action. As such, Condition 5.2.7 becomes obsolete and would be removed from the revised permit.

Changes for CAM in Section 7.1: Unit Specific Conditions for the Coal Boilers

Condition 7.1.5(g)

For the coal boilers, a non-applicability statement has been added for the CAM Rule with respect to the federal Acid Rain Program. This program, which is applicable to the coal boilers, addresses emissions of SO₂ and NO_x from electric generating units. This program requires subject sources to have continuous emissions monitoring for SO₂ and NO. The requirements of the CAM Rule do not apply because the standards and limitations under the Acid Rain program are

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specifically exempted from the requirements of the CAM Rule by 40 CFR 64.2(b) (1) (iii).

Condition 7.1.5(h)

For the coal boilers, a non-applicability statement has been added for the CAM Rule with respect to applicable State emission standards for SO₂, NO_x and mercury. The CAAPP permit specifies continuous compliance determination methods for these standards, relying on the continuous emission monitoring required by the Acid Rain program and the Illinois Mercury Rule (35 IAC Part 225). Pursuant to CFR 64.2(b) (1) (vi), the requirements of the CAM Rule do not apply for standards or limitations for which a continuous compliance determination method is specified by the Title V permit, as is the case for the applicable state standards for SO₂, NO_x and mercury.

Condition 7.1.5(i)

For the coal boilers, a non-applicability statement has been added for the CAM Rule with respect to the applicable State emission standard for CO. Control devices, as defined by 40 CFR 64.1, are not used on these boilers for CO. As provided by 40 CFR 64.2(a) (2), to be subject to the CAM Rule for a standard or limitation, an emission unit must use a control device to achieve compliance with such standard or limitation.

Condition 7.1.5(j)

For the coal boilers, a non-applicability statement would be added for the CAM Rule with respect to the applicable federal emission standards for mercury, filterable PM, total non-Hg HAP metals or individual non-Hg HAP metals, and acid gases under the MATS Rule. As provided by 40 CFR 64.2(b) (1) (i), CAM plans are not required for emission limitations or standards proposed by the Administrator after November 15, 1990. The MATS Rule clearly is in this category.

Condition 7.1.8(e) - Monitoring, Recordkeeping & Reporting under the CAM Rule

The revised CAAPP permit must address the monitoring, recordkeeping and reporting that the Permittee must conduct for the coal boilers in conjunction with its CAM Plan for PM. In the provisions of the permit that address monitoring for the coal boilers, new Condition 7.1.8(e) now indicates that the CAM Rule is applicable, with compliance assurance monitoring now required for PM. This condition refers to new Conditions 7.1.13-1 and 7.1.13-2 where the revised permit actually specifies the relevant requirements for monitoring, recordkeeping and reporting for subject PSEUs under the CAM Rules that are the subject of a CAM Plan.⁶¹ As already discussed, this CAM Plan for the coal boilers for PM emissions will "replace" certain requirements for Periodic

⁶¹ For the requirements of CAM related to monitoring, refer to 40 CFR 64.7(c) and (d), for required recordkeeping refer to 40 CFR 64.9(b), and for required reporting refer to 40 CFR 64.9(a).

Monitoring related to PM. This is provided for by new Condition 7.1.13-2(b), which states that "upon start of monitoring in accordance with the CAM Plan," those requirements will cease to apply.

Condition 7.1.9(c) (ii) (B) (In Revised Permit)

In conjunction with the changes to the CAAPP permit to address compliance assurance monitoring for the coal boilers for PM emissions, changes have been made to the Periodic Monitoring in Condition 7.1.9(c) (ii) (B) that would be applicable to the coal boilers during the period before compliance assurance monitoring would actually start. The changes to this condition maintain consistency with 40 CFR 70.6(a) (3) (i) (B) (Section 39.5(7) (d) (ii) of the Act).

In Condition 7.1.9(c) (ii) (B), a specific value for the level of opacity, 30 percent, 3-hour average, is now set as part of the Periodic Monitoring to assure compliance with the PM standard. This value takes the place of the statistical criterion or "method" that would have been required by the initial CAAPP Permit for the future establishment by the Permittee of value(s) of opacity that would serve to assure compliance with the PM standard.⁶² The "alternative" approach to Periodic Monitoring for PM that is now present in the revised permit is consistent with the relevant conclusion from the USEPA's decision in *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*.⁶³ Because 35 IAC 212.123 generally constrains opacity of the boilers to no more 30 percent, it would have been of limited value to further consider the PM emission rates that might accompany higher levels of opacity. Such an evaluation would have addressed circumstances in which opacity exceedances were occurring and the Permittee should already be taking corrective actions.⁶⁴

⁶² By way of further explanation, the Permittee appealed Condition 7.1.9(c) (ii) in the initial CAAPP permit, which would have required it to develop a value for opacity based on the results of emissions testing, with a numerical value for opacity set at the "upper bound of the 95 percent confidence interval." The Permittee argued that this requirement imposed an "unreasonable burden" and would not generate information that could be used in conjunction with other actions to address compliance with the PM standard(s). Settlement discussions confirmed the difficulties in this condition of the initial permit. Among other things, it required the correlation between opacity and PM emissions to meet a statistical criterion as related to the confidence interval. This criterion would not necessarily be able to be met given the nature of the correlation between opacity and PM emissions and the data that would be available from emissions testing to develop the correlation.

⁶³ The USEPA's Order in *In the Matter of Midwest Generation, LLC, Waukegan Generating Station*, is considered appropriate guidance from USEPA for this proceeding. This is because it addresses Title V permitting of a coal-fired power plant in Illinois.

⁶⁴ The nature of the relationship between opacity and PM emissions also means that a level of opacity at which compliance with the PM standard is reasonably assured can be more readily determined than a level of opacity that constitute clear evidence of a real violation of the PM standard. In this regard, the fact that levels of opacity from the boilers at or below 30 percent reasonably assure compliance with the PM standard does not mean that the converse also applies, i.e., that opacity above 30 percent indicates real violations of the PM standard. At the present time, it is not appropriate to draw additional conclusions beyond the narrow conclusion that opacity within 30 percent should assure compliance with the PM standard.

Condition 7.1.13-1 - Conditional Approval of CAM Plan

In new Condition 7.1.13-1, the Illinois EPA is proposing to "conditionally approve" the CAM Plan submitted by the Permittee for the PM emissions of the coal boilers, as discussed above.⁶⁵ This plan would be conditionally approved because there is currently not sufficient test data for the coal boilers for PM emissions with concurrent data for opacity and use of the dry sorbent injection systems recently installed on the boilers. Therefore, the Permittee must conduct further testing for PM emissions to confirm the ability of the monitoring to provide data sufficient to satisfy 40 CFR Part 64 and/or confirm the appropriateness of indicator ranges or designated conditions to satisfy 40 CFR 64.3(a)(2) and (3).

In its CAM Plan, the Permittee submitted an implementation plan and schedule that contains appropriate milestones for completing necessary testing for PM emissions, consistent with the requirements in 40 CFR 64.4(d)(1) and (e). This implementation plan and enforceable schedule have been included in the revised CAAPP permit as Condition 7.1.13-1.

The revised CAAPP permit makes clear that the future incorporation into the CAAPP permit of ranges for opacity will constitute a permit modification. Condition 7.1.13-1(b)(ii) provides that the Permittee, no later than 60 days following completion of CAM testing, shall submit an application for a proposed modification to the permit to "incorporate information for the opacity value that was derived from testing" As such, it is not necessary for the revised CAAPP permit to specify that the future incorporation into the permit of the specific ranges for indicators⁶⁶ will constitute a significant or other type of permit modification. Because of the conditional approval of the CAM Plan, the future approval of actual indicator ranges by the Illinois EPA must be preceded by an opportunity for public comment.⁶⁷ These indicator ranges could be incorporated into the permit through a significant modification of the permit as well as any other type of permitting action that includes an opportunity for public comment. Permit proceedings are governed by the applicable laws and rules that govern the CAAPP and their requirements cannot be established by a provision in the revised permit.

⁶⁵ Conditional approval of CAM Plans is provided for by the CAM Rule. See 40 CFR 64.7(a), 64.6(d) and 64.4(e).

⁶⁶ The CAM Plan currently does not specify an indicator range because the Permittee does not have data available over the anticipated operating conditions to reliably set this numerical indicator range. This is the reason for a conditional approval to provide a strict timeframe to gather this data.

⁶⁷ It is also relevant that the CAM Plan submitted by the Permittee did not include a specific procedure by which the value of indicators would be established or re-established. The CAAPP permit also does not include provisions setting forth how the Permittee must notify the Illinois EPA of changes to the values of the indicator ranges. As such, after required testing for PM is completed, specific values for the indicator must be included in a modified CAAPP permit, as provided for by 40 CFR 64.6(c)(2).

Condition 7.1.13-2 - Requirements for Compliance Assurance Monitoring

New Condition 7.1.13-2 and associated Table 7.1.13 address relevant elements of the CAM Rule and the CAM Plan submitted by the Permittee and that must now be included in the revised CAAPP permit for the Joppa Power Station.

Joppa's CAM Plan would use opacity as the indicator for PM emissions of the coal boilers. Opacity is monitored by the existing Continuous Opacity Monitoring Systems (COMS) for these boilers. A COMS is installed in each shared stack of the boilers.⁶⁸ Each COMS must continue to be operated to meet the specifications for opacity monitoring systems per 40 CFR Part 75 and Performance Specification 1 in 40 CFR Part 60, Appendix B.

As the CAM Plan would only be conditionally approved, as discussed above, testing for PM emissions will be conducted to determine appropriate indicator ranges for assuring compliance with the PM emissions limit under various operating conditions for the boilers. Testing will determine the upper limit of opacity, as measured in the flue gas stream, which assures compliance with the PM limit.⁶⁹

Additionally, identical comments received in previous permitting actions pertaining to the adequacy of Condition 7.1.13-2(c)(ii) have been submitted for which the Illinois EPA has responded numerous times. This condition simply reiterates the relevant language in 40 CFR 64.7(d)(1), which addresses how a source must respond to excursions or exceedances identified pursuant to its CAM monitoring. As such, it is fully appropriate that this condition be included in the issued permit in the form in which it is set out in the draft permit without any changes to the underlying regulatory language. Moreover, when an exceedance or excursion is identified, the CAM Plan, once fully approved by the permitting authority, should not predetermine the source's response based on the magnitude of the occurrence. As confirmed by 40 CFR 64.7(d)(2), the adequacy of a source's response to an exceedance or excursion is to be evaluated by a regulatory authority on a case-by-case basis.

Changes for CAM in Sections 7.2, 7.3, 7.4 and 7.6: Unit Specific Conditions for Coal Handling and Processing Equipment, Gasoline Storage Tank and Fly Ash Handling Equipment

Condition 7.2.5(c)

⁶⁸ Each pair of boilers shares a stack. The continuous opacity monitoring system for the pair of boilers is located in this stack.

⁶⁹ The permit does not specify how PM and opacity would be correlated because CAM does not require a correlation or regression analysis. Rather, the permit would require the Permittee to perform testing as specified in 40 CFR 64.6(d) to collect the necessary data consistent with 40 CFR 64.4(e).

For the coal handling equipment, which consists of various transfer and storage operations, a non-applicability statement has been added relative to the CAM Rule. Certain coal handling equipment is subject to limits for PM emissions set in a construction permit. However, the pre-control potential PM emissions of these units are less than the major source threshold. Therefore, these units do not meet the applicability criterion in 40 CFR 64.2(a)(3) and the requirements of the CAM Rule are not applicable.

Condition 7.3.5(a)

For the coal processing equipment, a non-applicability statement has been added relative to the CAM Rule. The coal processing equipment, which consists of coal crushing, is subject to NSPS requirements and a state emission standard for PM. However, the pre-control potential PM emissions of these emission units are less than the major source threshold. Therefore, these emission units do not meet the applicability criterion in 40 CFR 64.2(a)(3) and the requirements of the CAM Rule are not applicable.

Condition 7.4.5(d)

For the gasoline storage tank, a non-applicability statement has been added relative to the CAM Rule. The gasoline storage tank is subject to a state work practice to control emissions of VOM. However, the pre-control potential VOM emissions of this emission unit are less than the major source threshold. Therefore, these emission units do not meet the applicability criterion in 40 CFR 64.2(a)(3) and the requirements of the CAM Rule are not applicable.

Condition 7.6.5(a)

For the fly ash handling equipment, a non-applicability statement has been added relative to the CAM Rule. The fly ash handling equipment is subject to a state emission standard for PM. However, the pre-control potential PM emissions of this emission unit are less than the major source threshold. Therefore, these emission units do not meet the applicability criterion in 40 CFR 64.2(a)(3) and the requirements of the CAM Rule are not applicable.

Further Discussion of the Rationale for Use of Opacity As the Indicator Parameter in the CAM Plan for the Coal-Fired Boilers:

For purposes of air pollution control, opacity is the degree to which the transmission of light through the exhaust from an emission unit is reduced by the presence of particulate in the exhaust. In simpler terms, it is the "obscuring power" of the exhaust, expressed as a percent. As particulate in the exhaust from an emission unit acts to interfere with the passage of light through that exhaust, the level of opacity from an emission unit is indicative of the level of particulate in the exhaust. Accordingly, opacity readily serves as an indicator of PM emissions and the performance of PM control devices. Higher levels of opacity indicate higher rates of emissions. Lower levels of opacity indicate lower rates of emissions.

As a general matter, opacity monitoring is well established as a means to address PM emissions. Numerical values of opacity can be reliably determined

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by observations of the exhaust from emission units by individuals who have been properly trained and demonstrated their ability to make such observations.⁷⁰ Numerical measurements of observations can also be made with monitoring instruments that are installed in the stack or duct work of an emission unit, in which case opacity can be determined on a continuous basis. Standards and limits for opacity commonly address average opacity over a period of six minutes, based on a number of individual readings or measurements during such period. Accordingly, data for opacity is commonly reported as six minute averages, consistent with the terms in which opacity is commonly regulated. However, opacity can also be determined for shorter or longer averaging periods, including on a rolling three-hour average basis, as proposed by the Permittee in its CAM Plan.

For the coal boilers at the Joppa Power Station, the use of opacity as the CAM indicator will provide an effective means of assuring compliance with the applicable PM standard on an ongoing basis between the periodic stack tests for PM emissions. Indeed, for these boilers, continuous opacity monitoring is currently required by both federal rules (40 CFR 75.14) and state rules (35 IAC Part 201 Subpart M). Moreover, 40 CFR 64.3(d)(1) specifically provides that if a COMS is required for an emission unit pursuant to the Clean Air Act or regulations thereunder, the COMS shall be used to satisfy the CAM Rule. 40 CFR 64.3(d)(2) further provides that a COMS that satisfies the monitoring requirements of 40 CFR Part 75, like the COMS on these boilers, shall be deemed to satisfy the general design criteria for a CAM Plan, provided that monitoring with a COMS may be subject to the criteria for establishing indicator ranges.^{71, 72}

⁷⁰ The determination of opacity by human observations is addressed by USEPA Reference Method 9, *Visual Determination of the Opacity of Emissions from Stationary Sources*. This method addresses the training and certification of individuals to make such determinations by means of a smoke generator. This is a device that can be readily adjusted to generate both white and black smoke with opacity ranging from zero to 100 percent. The stack of the smoke generator is equipped with a "smoke meter" to provide instrumental opacity measurements for the smoke that is being generated. Individuals seeking to become certified opacity observers must demonstrate their ability to match the instrumental measurement of opacity over a run of 50 plumes of differing opacity. To be certified, the candidate must not have an error greater than 15 percent on any reading and must be within 7.5 percent for the average of all his or her readings. The certification process must be repeated every six months. Method 9 also addresses the procedures that must be made by certified observers when making actual determinations of opacity for emission units.

⁷¹ In addition, 40 CFR 64.4(b) provides that a COMS that satisfies the requirements and specifications in 40 CFR 64.3(d), as the COMS on these coal-fired boilers do, is "presumptively acceptable monitoring" for purposes of CAM. As Joppa's CAM Plan would use presumptively acceptable monitoring, the Permittee did not have to provide justification for the appropriateness of the use of continuous opacity monitoring in its CAM Plan other than an explanation of the applicability of such monitoring to these boilers, unless data or information is brought forward to rebut that assumption.

⁷² As explained by USEPA in the preamble to the adoption of CAM, CAM monitoring with a required COMS must be conducted using an appropriate indicator range for opacity that satisfies 40 CFR 64.3(a)(2) and (3). See 62 FR 54923, October 22, 1997.

Given these circumstances, it is wholly appropriate for the Permittee in its proposed CAM Plan to have selected opacity as the sole indicator for PM emissions. The Permittee has not proposed to use other secondary indicators in this plan. The Permittee could have proposed in this plan to also use actual operating parameters of the ESPs on the boilers. However, this would have made the CAM Plan far more complicated for purposes of implementation and enforcement by the Illinois EPA and USEPA. This is because an ESP for a coal-fired utility boiler is composed of many sections, each with its own electrical system. The overall performance of the ESP is affected by how each section in the ESP is performing and the position of the ESP sections relative to each other.⁷³ The ESP operating parameters would only address certain aspects of the operation of an ESP, e.g., the electrical power consumption of the ESP.⁷⁴ In contrast, opacity serves as a direct indicator of the overall performance of the ESP. This is because opacity also addresses aspects of ESP operation for which there is not instrumentation, such as proper operation of the ash hoppers.⁷⁵

⁷³ In an ESP for a coal-fired utility boiler, the exhaust flow is divided and passes through the ESP in separate "gas paths," each path having several ESP sections in series. The control efficiency of the ESP depends on the aggregate performance of all the sections in the ESP.

⁷⁴ For example, when developing its CAM Technical Guidance to assist subject sources and permit authorities, USEPA recognized that ESP operating parameters could not readily be used to address the performance of an ESP on a coal boiler. In its proposed CAM Protocol for ESPs on coal boilers, USEPA suggested a two-stage approach to CAM monitoring for coal boilers. The first stage relied on opacity. The second stage, which would involve ESP operating parameters, would only come into play when opacity exceeded a threshold value. However, the ESP operating parameters would not be directly used as indicators of compliance. Refer to *Compliance Assurance Monitoring (CAM) Protocol for an Electrostatic Precipitator (ESP) Controlling Particulate Matter (PM) Emissions from a Coal-Fired Boiler* (proposed), USEPA, April 2003.

⁷⁵ The fact that the initial CAAPP permit required the Permittee to conduct operational monitoring for various operating parameters of the ESP does not show that the CAM Plan should be based on these operating parameters. It is appropriate that such operating records be required for the ESP for several reasons. These records will help assure that the ESP is properly operated and maintained. This is because they may directly reveal deterioration in the operational condition of a particular section in the ESP, which should be addressed as part of periodic maintenance and repair of the ESP. These records will also facilitate corrective action in the event of opacity excursions. In particular, when an opacity excursion is caused by an electrical problem with the ESP, as is often the case, these records will enable the source to readily determine this and assist in the diagnosis of such problems. If electrical problems at the ESP are not the cause of an excursion, it will also enable the source to focus on other aspects of the operation of the ESP and associated boiler.

CHAPTER 6 - PLANNED ISSUANCE OF A REVISED ACID RAIN PROGRAM PERMIT

The Illinois EPA is proposing to issue a revised Acid Rain Program Permit for Joppa pursuant to and consistent with Section 39.5(17)(f) of the Illinois Environmental Protection Act and Titles IV and V of the federal Clean Air Act. This permit would address the six coal-fired electrical generating units at this source, which are referred to as Joppa Units 1 through 6 for purposes of the Acid Rain Program.

The revised acid rain permit would reflect applicable regulatory requirements of the federal Acid Rain Program. As such, it would require the source to hold SO₂ allowances under the federal Acid Rain Program to account for SO₂ emissions from the affected units. An allowance is a limited authorization to emit up to one ton of SO₂ during or after a specified calendar year. As the affected units are existing units under the Acid Rain Program, the source receives annual allocations of allowances from USEPA for the units, as would be identified in the permit. The source may also participate in allowance trading with other sources to obtain additional allowances or transfer surplus allowances.

The revised acid rain permit would also address the applicable limit under the Acid Rain Program that applies to NO_x emissions of the affected units, 0.45 lb/mmBtu, annual average. In this regard, the permit would no longer provide for compliance with the NO_x limits of the Acid Rain Program to be shown by averaging of the NO_x emissions of the affected units with the NO_x emissions of other units operated by the Permittee that are subject to the Acid Rain Program.

The revised acid rain permit would also address emission monitoring and reporting requirements under the Acid Rain Program. The permit would not affect the source's responsibility to meet all applicable local, state, and federal requirements.

The Illinois EPA is proposing that the revised acid rain permit would expire when the CAAPP permit for Joppa will expire. This will coordinate the term of the revised permit with the term of the CAAPP permit for Joppa, as is provided for by 40 CFR 72.73(b)(2). This will enable the renewal of the current CAAPP permit for Joppa and the next renewal of the acid rain permit to be processed at the same time.

CHAPTER 7 - SUPPLEMENTAL INFORMATION

This chapter provides supplemental information about the emission units at Joppa to assist interested individuals in understanding the changes to the CAAPP permit that are now planned. General discussions about reporting requirements, start-up and malfunction/breakdown, incorporation by reference, and periodic monitoring in CAAPP permits are included in Sections 7.6 through 7.9 below.

7.1 Coal-Fired Boilers

This source has six coal-fired boilers whose steam output is used for generation of electricity. Each pair of boilers is served by a single stack. The boilers also fire natural gas or fuel oil as auxiliary fuel during startup and for flame stabilization. The boilers also have the capability to fire a combination of coal and natural gas. Boilers 1 and 4 further have the capability to fire only natural gas as their principal fuel.

CO emissions from the boilers are addressed by good combustion and work practices. NO_x emissions from the boilers are controlled by combustion control measures including low NO_x burners and over-fire air systems (OFA). Emissions of PM and non-mercury hazardous air pollutant (HAP) metals are controlled by electrostatic precipitators (ESP). In addition, the boilers have the capability of operating flue gas conditioning (FGC) systems (SO₃ Injection). SO₂ emissions are controlled by use of refined sub-bituminous coal. Mercury emissions are controlled by the ESPs and the activated carbon injection (ACI) systems which inject a sorbent, such as activated carbon, into the flue gas of each boiler prior to the ESP.

The boilers are subject to emission standards for CO, NO_x, PM (including non-mercury HAP metals), SO₂, HCl and mercury and a standard for the opacity of emissions. The Illinois Mercury Rule and the Mercury and Air Toxics Standard Rule require continuous mercury monitoring systems, either mercury CEMS or mercury sorbent trap monitoring systems (e.g., an excepted monitoring system). The boilers are also subject to the federal Acid Rain Program, which imposes requirements on SO₂ and NO_x emissions and requires that the boilers be equipped with continuous emissions monitoring systems (CEMS) for SO₂ and NO_x with computerized systems for collection of emission data. The boilers are also subject to the federal Cross-State Air Pollution Rule (CSAPR), also known as the Transport Rule. CSAPR requires the source to hold allowances for its actual annual SO₂ emissions and annual and Ozone Season NO_x emissions.

To show compliance with the Acid Gases portion of the MATS rule, the Permittee has elected quarterly performance testing for HCl. In the most recent quarterly test for Stack 1 (Boilers 1 and 2), the results were 0.007 lb/mmBtu versus a standard of 0.0020 lb/mmBtu.

For the non-mercury HAP metals standards for the MATS Rule, the source has elected to perform quarterly emissions testing to demonstrate compliance. Recent performance testing for Stack 1 (Boilers 1 and 2) for total non-Hg HAP metals showed compliance with the applicable limit (0.000050 lb/mmBtu) with a significant margin of compliance (36%).

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The boilers are subject to state and federal rules for mercury emissions which require continuous monitoring systems. The source has elected to use mercury sorbent trap monitoring systems, an excepted monitoring system, to demonstrate compliance. The source's most recent quarterly reports submitted for the state requirements show compliance for the state limits and hence an even greater margin for the federal requirements since the state limit is significantly lower than the federal limit (0.0080 lb/GWh versus 0.0130 lb/GWh). The 12-month rolling average mercury emissions for the plant were 0.0070, 0.0068 and 0.0065, for July, August and September, respectively.

The boilers are operated pursuant to formal operating procedures. The CAAPP permit and MATS rule require that the boilers must be started up in accordance with procedures that are developed and maintained to minimize emissions. In addition, they must operate all continuous monitoring systems during startup and use "clean fuels" for ignition.

The boilers have the potential to exceed the applicable state emission standards for PM, CO and opacity during malfunction and breakdown. As provided by applicable state rules, subject to certain terms and conditions, the permit authorizes the source to make certain claims related to continued operation with emissions in excess of applicable state emission standards during such events. In particular, such continued operation must be necessary to provide essential service or to prevent injury to personnel or severe damage to equipment. In addition, upon occurrence of excess emissions, the source must, as soon as practicable, reduce boiler load, repair the affected boiler, remove the affected boiler from service, or undertake other action so that exceedances of state emission standards cease.

The Permittee must keep a variety of operational records for each boiler and its control equipment. For startup, records must be kept with the date, description, and duration of each startup. Further records are required if a startup does not progress in a routine manner to normal operation and compliance with applicable standards or if the source's startup procedures are not followed.

For malfunction/breakdown events, records must be kept for each incident when operation of a boiler continued with excess emissions. These records must include the date, duration, and description of the malfunction/breakdown; the corrective actions used to reduce the quantity of emissions and the duration of the incident; information on whether opacity exceeded the applicable standard for two or more hours; whether PM or CO emissions exceeded the applicable standard; a detailed explanation of why continued operation of the affected boiler was necessary; the preventative measures that have been or will be taken to prevent similar malfunctions or breakdowns in the future including any repairs to the affected boilers and associated equipment; and an estimate of the magnitude of PM and/or CO emissions during the incident. Maintenance and repair records must also be kept.

The provisions of the permits for notification and reporting provide a hierarchy of reports. Excess PM emissions, which would be associated with malfunction/breakdown of equipment, must be followed by a written report within

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15 days of the event. Extended opacity exceedances, in which the total duration of exceedances is greater than the specified time period are also to be reported immediately and then followed with a written report within 15 days if they persist for more than 120 minutes. The Permittee is also required to submit quarterly reports that address exceedances, along with certain data from the continuous monitoring systems for SO₂ and NO_x.

The Permittee is required to provide information in the quarterly reports addressing all deviations from applicable requirements of the permit, including both emission control requirements and requirements for monitoring and recordkeeping. Such reports would also include information on the total operating hours; the greatest hourly load achieved by each boiler; a discussion of significant changes in the fuel supply; the number, total duration, and description of startups; information for SO₂, NO_x, PM and opacity; and operational information for continuous monitoring systems. These reports must include the following information for each period when emissions were in excess of the applicable SO₂ limitation: the starting date and time of the excess emissions; the duration of the excess emissions; the measured emissions rate, if any; and a detailed explanation of the cause of the excess emissions, if known, with a discussion of any corrective actions taken. For opacity and PM exceedances, the quarterly reports must also contain information for each period when opacity is in excess of applicable standards. The reports must include the starting date and time of the excess opacity, duration of the excess opacity, magnitude of the excess opacity based on six-minute average, the cause of the excess opacity, if known, a detailed explanation of corrective actions taken, identification of any previous report identifying excess opacity, and information regarding incidents when operation continued during malfunction or breakdown with excess opacity.

7.2 Coal Handling Equipment

The source handles, transfers, and stores coal in a series of operations. The PM emissions from coal handling are subject to an opacity limit and various rules that address stack and fugitive PM emissions.

The CAAPP permit generally requires implementation of emission control measures for coal handling. Coal processing equipment is subject to similar requirements. The Permittee must specify the control measures that it will implement in a plan or "Control Measures Record". The permit would also require submittal of the Control Measures Record and any changes to this record to the Illinois EPA.

In general, monthly inspections of equipment and control measures are to be performed while the equipment is in use. These inspections are to confirm implementation of the work practices to control dust (PM emissions). Visible emissions observations are to be performed on an annual basis to confirm compliance with the opacity limit. Opacity observations using Reference Method 9 are required every three years.

Visual surveys will be completed for coal storage pile operations twice each month from May through November and on a monthly basis other times in calendar

year. The surveys will confirm coal storage pile operations are complying with visual emission limitations in the permit.

Records must be maintained for, among other things, the control measures that are being used, operational data, maintenance and repair activities, and any malfunction/breakdown of equipment. Records of the required inspections and surveys must also be kept.

Reporting of deviations from the control measures required by the record that last more than 12 hours must occur within 30 days. All deviations from applicable standards or limitations in the permit must be addressed in a quarterly report, submitted with the quarterly report for the coal boilers.

7.3 Coal Processing Equipment

The Permittee prepares or processes coal for use as fuel in its boilers with screens and crushers that reduce the size of the coal. The PM emission from coal processing is subject to an opacity limit and various regulations that address fugitive PM emissions.

Monthly inspections of equipment and control measures are to be performed while the equipment is in use. These inspections are to confirm implementation of the work practices to control dust (PM emissions). Visible emissions observations are to be performed on an annual basis to confirm compliance with the opacity limit. Opacity observations using Reference Method 9 are required every three years.

Records must be maintained for, among other things, the control measures that are being used, operational data, maintenance and repair activities, and any malfunction/breakdown of equipment. Records of the required inspections must also be kept.

Reporting of deviations from the control measures required by the record that last more than 12 hours must occur within 30 days. All deviations from applicable standards or limitations in the permit must be addressed in a quarterly report, submitted with the quarterly report for the coal boilers.

7.4 Gasoline Storage Tank

The Permittee utilizes a small gasoline storage tank for fueling of plant vehicles. The tank must use permanent submerged loading to reduce emissions of volatile organic material from the transfer of gasoline into the tank.

Annual inspections of the tank are required. The Permittee also must keep appropriate records to show compliance with applicable requirements. The Permittee must report significant deviations from the applicable permit requirement, i.e., failure of the submerged loading, within 30 days. The Permittee must report any other deviations with the quarterly reports for the coal boilers.

7.5 Fly Ash Handling Equipment

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The Permittee operates a dry ash removal system at the source that handles and stores fly ash collected at the coal boilers. The PM emissions from the fly ash handling equipment are subject to an opacity limit and regulations that address stack and fugitive PM emissions.

Monthly inspections of equipment and control measures are required of the operation while the equipment is in use. In addition, a weekly inspection is required for the fly ash load out operations.

Visible emissions observations are required at least annually except for fly ash load out operations, for which observations are required quarterly. Such observations are only required for ash handling equipment from which visible emissions, i.e., any visible emission, are normally observed. Opacity observations using Reference Method 9 are required every three years.

Records must be maintained for, among other things, the control measures that are being used, operational data, maintenance and repair activities, and any malfunction/breakdown of equipment. Records of the required inspections must also be kept.

Reporting of deviations from the control measures required by the record that last more than 12 hours must occur within 30 days. All deviations from applicable standards or limitations in the permit must be addressed in a quarterly report submitted with the quarterly report for the coal boilers.

7.6 Discussion of Reporting Required by CAAPP Permits

The effectiveness of the CAAPP relies in part upon accurate and timely reporting by sources. The Illinois EPA, USEPA, and the public rely on reports submitted by sources for information about the compliance status of sources and to help guide their investigations and actions. CAAPP permits generally contain four types of reporting requirements to address and facilitate compliance with applicable requirements. CAAPP permits contain "regulatory" reporting requirements that are carried over from applicable state and federal rules. CAAPP permits require prompt reporting of any deviations that occur from the applicable requirements in the permit. CAAPP permits also require reports on the monitoring that is required under the permit. Finally, CAAPP permits require annual compliance reports or "compliance certifications" in which a source must report on its compliance status during the preceding calendar year. These four types of reporting are all present in the CAAPP permit for Joppa.

7.7 Discussions of Start-up and Malfunction/Breakdown

As related to state emissions standards under Illinois' State Implementation Plan (SIP), this CAAPP permit addresses excess emissions during startups or periods of malfunction or breakdown in a manner that is consistent with the

SIP. 35 IAC 201.149, which is currently part of Illinois' SIP,⁷⁶ prohibits continued operation of an emission unit during malfunction or breakdown of the unit or associated air pollution control equipment, or startup of an emission unit or associated air pollution control equipment, if such operation would cause a violation of an applicable state emission standard or limitation absent express permit authorization.⁷⁷

The provisions governing such permit authorizations are in 35 IAC Part 201 Subpart I, which is also part of Illinois' SIP. These provisions outline the 2-step process for asserting a prima facie defense to exceedances of state emission standards during malfunction/breakdown and startup. The first step, as set forth at 35 IAC 201.261, consists of a source seeking authorization by means of a permit application to make a future claim of malfunction/breakdown or startup.⁷⁸ Absent a request for authorization in a permit application, followed by the express grant of such authorization in an issued permit, a source cannot make a claim of malfunction/breakdown or startup under Illinois rules in the event of a future exceedance of a state emission standard during such periods. These regulatory provisions are specifically recognized by the CAAPP, pursuant to Section 39.5(5)(s) of the Act.

The second step in Illinois' process related to excess emissions during malfunction/breakdown or startup, as addressed by 35 IAC 201.262, addresses the showing that a source must make for a viable claim of malfunction/breakdown or startup. For malfunction/breakdown, this showing consists of a demonstration that continued operation was necessary to prevent injury to persons or severe damage to equipment, or was required to provide essential services. For startup, this showing consists of a demonstration that all reasonable efforts have been made to minimize emissions from the startup event, to minimize the duration of the event, and to minimize the frequency of such an event. In some respects, this showing for startups may be evaluated based on past practice when considering whether a permit should provide authorization to make claims related to startup. However, this showing also continues to be relevant on an ongoing basis, like the showing required for malfunction/breakdown events, which may never actually occur. This is because the showing for startups also relates to future activities whose exact circumstances are not known.

⁷⁶ USEPA has issued a "SIP Call" that requires Illinois, as well as other states, to remove or appropriately revise provisions that potentially act as an obstacle to enforcement for violations of emission limits in the SIP that occur during startup, shutdown or malfunction.

⁷⁷ 35 IAC 201.149 and 35 IAC Part 201 Subpart I only address violations of state emission standards and limitations, as found in 35 IAC Subtitle B: Air Pollution, Chapter I: Pollution Control Board, Subchapter c: Emission Standards and Limitations for Stationary Sources. "Subchapter c" includes Illinois emissions standards for various pollutants, including particulate emissions (35 IAC Part 212), SO₂ emissions (35 IAC Part 214), and NO_x emissions (35 IAC Part 217).

⁷⁸ Pursuant to 35 IAC 201.261, a request related to malfunction/breakdown should include an explanation of why continued operation is necessary; the anticipated nature, quantity and duration of emissions; and measures that will be taken to minimize the quantity and duration of emissions. A request related to startup should include a description of the startup procedure, duration and frequencies of such startups, type and quantity of emissions during startups, and efforts to minimize such startup emissions, duration of individual startups, and frequency of startups.

For certain emission units at Joppa, malfunction and breakdown and/or startup authorization is already provided under Illinois' rules. The relevant permit applications contained the applicable forms and provided the relevant information specified by the applicable state rules. The Illinois EPA reviewed these requests and granted authorization to the source in the CAAPP permit to make claims of malfunction and breakdown and/or startup, as appropriate. The planned CAAPP permit would clearly set forth the emission units, types of authorization provided (i.e., malfunction/breakdown and/or startup), and the requirements that have been imposed in conjunction with such authorizations.

These authorizations in the CAAPP permit do not equate to an "automatic exemption" from otherwise applicable state emission standards. The grant of initial authorizations for violations of state emission standards during startup and certain malfunctions and breakdowns was and will be fully consistent with long standing practice in Illinois for permitting and enforcement. Due to the nature of power plants and the inability to simply shutdown coal boilers and the nature of the start-up of coal boilers, excess emissions may occur during startup or malfunction and breakdown that the source cannot readily anticipate or reasonably avoid. However, as the source should be fully aware, this authorization in the CAAPP permit related to malfunction and breakdown events and startup does not bar the Illinois EPA or the source from any case by case determination of whether a malfunction/breakdown or startup is defensible.

In summary, the provisions in the SIP and the CAAPP permit that delineate the elements for a viable claim of malfunction/breakdown or startup do not translate into any advance determination related to actual occurrences of excess emissions. Rather, together they provide a framework whereby a source is provided with the ability to make a claim of malfunction/breakdown or startup, with the viability of any such claim subject to specific review against the relevant requirements. In this regard, 35 IAC 201.265 clearly states that violating an applicable state standard even if consistent with any express authorization regarding malfunction/breakdown or startup in a permit shall only constitute a prima facie defense to an enforcement action for the violation of such standard. Any excess emissions during these events could potentially be the subject of enforcement actions.

7.8 Incorporation by Reference

Based on USEPA guidance, as found in USEPA's White Paper 2⁷⁹ and petition responses by the Administrator of USEPA, Title V permit authorities may, within their discretion, incorporate required plans into a Title V by reference. As recognized in *White Paper 2*, permit authorities can effectively streamline the contents of a Title V permit, avoiding the clutter of restated text. However, it is also recognized that the benefits of incorporation of plans must be carefully balanced by a permit authority with its duty to issue permits in a way that is "clear and meaningful" to the permittee and the public.

⁷⁹ Memorandum, *White Paper Number 2 for Improved Implementation of The Part 70 Operating Permits Program*, March 5, 1996, Lydia N. Wegman, Deputy Director, Office of Air Quality Planning and Standards, USEPA, to Directors, Air Regional Offices, USEPA.

As related to incorporation by reference, USEPA guidance stresses the importance of identifying, *with specificity*, the object of the incorporation.⁸⁰ Accordingly, for conditions in CAAPP permits that incorporate plans, the general practice of the Illinois EPA is to briefly describe the subject plan and manner in which it applies to the source. Identifying the nature of the source activity, the regulatory requirements or the nature of the equipment associated with the plan is consistent with recommendation of *White Paper 2*. The actual contents of plans are not restated in the permit, as this would plainly defeat the purpose of incorporating material by reference, as recognized by relevant USEPA guidance.

Due to changing circumstance or by underlying rules or requirements, plans need to be revised from time to time. Except where expressly precluded by the relevant rules, the CAAPP Permit allows the Permittee to make future changes to plans without undergoing formal permit revision procedures. This approach will allow flexibility to make required changes to a plan without separately applying for a revised permit and, similarly, will lessen the impacts that could result for the Illinois EPA if any change to a plan required a permitting transaction. When revised plans are submitted to the Illinois EPA during the permit term, changes to the incorporated plans are automatically incorporated into the CAAPP Permit unless otherwise provided by the permit.

7.9 Periodic Monitoring

Pursuant to Section 504(c) of the Clean Air Act, Illinois' CAAPP permit must set forth monitoring requirements, commonly referred to as "Periodic Monitoring", to assure compliance with the applicable emission standards, emission limits and other substantive requirements of the permit. As a general matter, the required content of a CAAPP Permit with respect to such Periodic Monitoring is addressed in Section 39.5(7) of the Act.⁸¹ Section 39.5(7)(b) of the Act⁸² provides that in a CAAPP Permit:

⁸⁰ Past USEPA petition responses have stated that permit authorities must ensure the following: (1) referenced documents be specifically identified; (2) descriptive information such as the title or number of the document and the date of the document be included so that there is no ambiguity as to which version of the document is being referenced; and (3) citations, cross references, and incorporations by reference are detailed enough that the manner in which any referenced material applies to a facility is clear and is not reasonably subject to misinterpretation.

⁸¹ The provisions in the Act for Periodic Monitoring in CAAPP permits reflect parallel requirements in the federal guidelines for State Operating Permit Programs, 40 CFR 70.6(a)(3)(i)(A), (a)(3)(i)(B), and (c)(1).

⁸² Section 39.5(7)(d)(ii) of the Act further provides that a CAAPP Permit shall:

Where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring (which may consist of recordkeeping designed to serve as monitoring), require Periodic Monitoring sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit ...

Section 39.5(7)(p)(i) of the Act also provides that a CAAPP permit shall contain "Compliance certification, testing, monitoring, reporting and record keeping requirements sufficient to assure compliance with the terms and conditions of the permit."

The Agency shall include among such conditions applicable monitoring, reporting, record keeping and compliance certification requirements, as authorized by paragraphs (d), (e), and (f) of this subsection, that the Agency deems necessary to assure compliance with the Clean Air Act, the regulations promulgated thereunder, this Act, and applicable Board regulations. When monitoring, reporting, record keeping and compliance certification requirements are specified within the Clean Air Act, regulations promulgated thereunder, this Act, or applicable regulations, such requirements shall be included within the CAAPP Permit.

Accordingly, the scope of the Periodic Monitoring that must be included in a CAAPP Permit is not restricted to monitoring requirements that were adopted through rulemaking or imposed through permitting. When applicable regulatory emission standards and control requirements or limits and control requirements in relevant Title I permits are not accompanied by compliance methodologies, it is necessary for monitoring requirements to be established in a CAAPP Permit.⁸³ Monitoring requirements must also be established when standards and control requirements are accompanied by compliance methodologies but those methodologies are not adequate to assure compliance with the applicable standards or requirements. For this purpose, the requirements for Periodic Monitoring in a CAAPP Permit may include requirements for emission testing, emissions monitoring, operational monitoring, non-instrumental monitoring, and recordkeeping for each emission unit or group of similar units at a facility, as required by rule or permit, as appropriate or as needed to assure compliance with the applicable substantive requirements. Various combinations of monitoring measures will be appropriate for different emission units depending on their circumstances, including the substantive emission standards, limitations and control requirements to which they are subject.

What constitutes sufficient Periodic Monitoring for particular emission units, including the timing or frequency associated with such Monitoring requirements, must be determined by the permitting authority based on its knowledge, experience and judgment.⁸⁴ For example, as Periodic Monitoring must collect representative data, the timing of Monitoring requirements need not match the averaging time or compliance period of the associated substantive requirements, as set by the relevant regulations and permit provisions. The timing of the various requirements making up the Periodic Monitoring for an emission unit is something that must be considered when those Monitoring requirements are being

⁸³ The classic example of regulatory standards for which Periodic Monitoring requirements must be established in a CAAPP permit are state emission standards that pre-date the 1990 Clean Air Act Amendments that were adopted without any associated compliance procedures. Periodic Monitoring must also be established in a CAAPP permit when standards and limits are accompanied by compliance procedures but those procedures are determined to be inadequate to assure compliance with those requirements.

⁸⁴ The test for the adequacy of "Periodic Monitoring" is a context-specific determination, particularly whether the provisions in a Title V permit reasonably address compliance with relevant substantive permit conditions. 40 CFR 70.6(c)(1); see also 40 CFR 70.6(a)(3)(i)(B); see also, *In the Matter of CITGO Refinery and Chemicals Company L.P.*, Petition VI-2007-01 (May 28, 2009); see also, *In the Matter of Waste Management of LA. L.L.C. Woodside Sanitary Landfill & Recycling Center, Walker, Livingston Parish, Louisiana*, Petition VI-2009-01 (May 27, 2010); see also, *In the Matter of Wisconsin Public Service Corporation's JP Pulliam Power Plant*, Petition V-2009-01 (June 28, 2010).

established. For this purpose, Periodic Monitoring often consists of requirements that apply on a regular basis, such as routine recordkeeping for the operation of control devices or the implementation of the control practices for an emission unit. For certain units, this regular monitoring may entail "continuous" monitoring of emissions, opacity or key operating parameters of a process or its associated control equipment, with direct measurement and automatic recording of the selected parameter(s). As it is infeasible or impractical to require emissions monitoring for many emission units, instrumental monitoring is more commonly conducted for the operating parameters of an emission unit or its associated control equipment. Monitoring for operating parameter(s) serves to confirm proper operation of equipment, consistent with operation to comply with applicable emission standards and limits. In certain cases, an applicable rule may directly specify that a particular level of an operating parameter be maintained, consistent with the manner in which a unit was being operated during emission testing. Periodic Monitoring may also consist of requirements that apply on a periodic basis, such as inspections to verify the proper functioning of an emission unit and its associated controls.

The Periodic Monitoring for a unit may also include measures, such as emission testing, that would only be required once or only upon specific request by the Illinois EPA. These requirements are typically accompanied by monitoring requirements would apply on a regular basis. When emission testing or other measure is only required upon request by the Illinois EPA, it is included as part of the Periodic Monitoring for an emission unit to facilitate a response by the Illinois EPA to circumstances that were not contemplated when Monitoring was being established, such as the handling of a new material or a new mode of operation. Such monitoring would also serve to provide further verification of compliance, along with other potentially useful information. As emission testing provides a quantitative determination of compliance, it would also provide a determination of the margin of compliance with the applicable limit(s) and serve to confirm that the Monitoring required for an emission unit on a regular basis is reliable and appropriate. Such testing might also identify specific values of operating parameters of a unit or its associated control equipment that accompany compliance and can be relied upon as part of regular Monitoring.

Attachment 1 - Other Changes Planned by Minor Modification

Introduction

Pursuant to Section 39.5(14)(a) of the Act, the planned changes listed below are all minor modifications.⁸⁵ Pursuant to Section 39.5(14)(a)(v) of the Act, the Illinois EPA may not issue a revised CAAPP permit by minor modification until after a 45-day period for USEPA review has passed or USEPA has notified the Illinois EPA that it will not object to the issuance of the revised permit, whichever comes first. However, the Illinois EPA can approve the permit modification prior to that time. Pursuant to Section 39.5(14)(a)(vi) of the Act, the Permittee may make the change proposed in its minor permit modification application immediately after it files such application. After the Permittee makes the changes, and until the Illinois EPA takes final action, the Permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time period, the Permittee need not comply with the existing permit terms and conditions that it seeks to modify. If the Permittee fails to comply with its proposed permit terms and conditions during this period, the relevant existing permit terms and conditions may be enforced. Pursuant to Section 39.5(14)(a)(vii) of the Act, changes that are minor modifications are not covered by any permit shield pursuant to Section 39.5(7)(j) of the Act.

Changes in Section 1: Introduction

Condition 1.4

The information concerning Midwest Electric Power was moved to Condition 5.1.3 of the permit where "single source" information is normally located. Minor wording changes would also be made for clarification.

Changes in Section 4: Emission Units

Condition 4.0

⁸⁵ The Act defines "minor permit modification" to mean a permit modification as listed in Section 39.5(14)(a)(i) of the Act. All the planned minor modification changes to the CAAPP permit for this source are not administrative amendments and meet the following criteria:

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject (i.e., a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the Clean Air Act; and an alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act);
- Are not modifications under any provision of Title I of the Clean Air Act; and
- Are not required to be processed as a significant modification.

A row for Insignificant Activities would be added and the title would be updated to remove the word "SIGNIFICANT". A note indicating that the information and descriptions in the table are for informational purposes only would also be added. Also additional revisions would be made to the table to conform to other sections of the permit.

Changes in Section 5: Overall Source Conditions

Condition 5.2.2

This condition would be revised to more clearly indicate the various compliance procedures applicable to the source are set forth in Section 7 of the permit, and in Condition 5.2.2(b) the word "and" would be changed to "or" for improved clarity.

Condition 5.2.5

The phrase "owner or operator" would be changed to "Permittee" for consistency with CAAPP permits issued to other power plants in Illinois.

Condition 5.5.1

The actual amount of the maximum annual fee would be removed since it has changed since the initial permit issued in 2005.

Changes in Section 6: Conditions for Emission Control Programs

Condition 6.2

The Acid Rain Program language would be updated for improved clarity and consistency with language used in the Acid Rain Program Section of CAAPP permits issued to other coal-fired power plants in Illinois.

Condition 6.2.3

Clarification would be made that opacity is monitored using a continuous opacity monitoring system (COMS) not a CEMS.

Changes in Section 7.1: Unit Specific Conditions for the Coal-Fired Boilers

Condition 7.1.3(b) and (c)

These conditions would be revised to more clearly identify or cross reference the specific standards related to the Permittee authorizations for continued operations during startup or malfunction/breakdown events.

Condition 7.1.4(b)

The equation used in the state standard for SO₂ emissions was updated in 2006 and would therefore be updated in this condition. Wording would also be updated for clarity and consistency. The good engineering practice (GEP)

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heights for each stack would now be included in this condition but the previously calculated standard for SO₂ emissions would not be changed.

Condition 7.1.4(c)

The standard for opacity would be cross-referenced for consistency with other standards cross-referenced in Section 7.1.4.

Condition 7.1.4(e)

This condition would be revised to reference the Acid Rain Program Permit in Section 6.2 consistent with other cross references to Section 6 programs in Section 7.1.4.

Condition 7.1.4(f)

The language in this condition would be updated to more closely follow the language in 35 IAC 217 Subpart V.

Condition 7.1.5(a)

The origin of authority would be added to this condition. In addition, wording would be changed to clarify that solid fuel refers to coal, and that "other fuels" refers to natural gas or liquid fuel. The new wording would better track the regulatory language.

Condition 7.1.5(b)

The language in this condition would be revised to more clearly explain that opacity monitoring is being conducted in accordance with the NSPS as specified at 40 CFR 75.14 of the Federal Acid Rain Program because the Permittee is not subject to the opacity monitoring requirements in 35 IAC 201 Subpart L.

Condition 7.1.6(b)

A cross reference to the Single Source section of the permit would be added for clarity.

Condition 7.1.7(a)

The introductory language to Condition 7.1.7 in the initial permit, containing an origin and authority citation to the Act, would become Condition 7.1.7(a). An obsolete reference in Condition 7.1.7(a) (i) to testing done after December 21, 2003, would be removed.

Condition 7.1.7(a) (iii)

The allowable PM emission rates in the example provided for demonstration purposes would be revised to reflect the state PM emission standards that actually apply and be more representative of the boilers at Joppa.

Conditions 7.1.7(a) (v) (A), (B) and (C)

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"Process wastes" would no longer be addressed in these conditions. This is because the Permittee is not allowed to burn such materials. This will maintain consistency with non-applicability of 40 CFR 63 Subpart CCCC, as would be addressed by the new non-applicability statement added to the permit at Condition 7.1.5(e).

Condition 7.1.7(c) (i)

This condition would be revised to eliminate redundancies with the test plan submittal requirements in Condition 8.6.2.

Condition 7.1.8(a) (ii)

The reference to opacity would be updated to reflect the change that would be made in Condition 7.1.4(a), which would cross-reference Condition 5.2.2(b).

Condition 7.1.8(b)

The condition would be revised to clarify that the requirements in this condition are related to continuous emission monitoring systems (CEMS).

Condition 7.1.9(a) (ii)

The phrase "fuel material" would be changed to just "fuel" and the word "affected" would be added before "boilers(s)" for clarity and consistency with other conditions in the permit.

Condition 7.1.9(a) (iv) (B)

The phrase "other fuel material" would be revised as "alternative fuel" for clarity and consistency with other conditions in the permit.

Condition 7.1.9(a) (v) (B)

The condition would be revised for consistency with other conditions in the permit to refer to "fuel(s)" or "fuel" instead of "material". The phrase "at a minimum" would be removed because appropriate recordkeeping requirements were specifically identified in the condition.

Condition 7.1.9(b)

The word "operating" would be removed since the records include more than just operating records.

Condition 7.1.9(b) (ii)

The condition would be revised to clarify the noted records are required for an affected boiler served by an ESP.

Conditions 7.1.9(c), (d), (e) and (h)

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The phrase "as a minimum" would be removed to improve clarity and consistency, in addition to other minor wording or phrase changes. The reference to 35 IAC 201.407 in Condition 7.1.9(c) would be removed since it only requires retention of records for two years, while the overall source requirement in Condition 5.6.2 requires retention of records for five years.

Various changes would be made to simplify Conditions 7.1.9(c) (i), (d) (i), and (e) (i). Conditions in (B), (C) and (D) in the initial permit for each of these conditions addressed recordkeeping for quality assurance and control activities for the continuous emission monitoring systems for opacity, SO₂ and NO_x emissions from the boilers. In the revised permit, the relevant records would be consolidated into a single condition, Condition 7.1.9(c) (i) (B), (d) (i) (B) and (e) (i) (B). Cross references to the appropriate conditions regarding submittal of quarterly reports would also be corrected.

In Condition 7.1.9(c) (i) (A), the recordkeeping requirements for the continuous opacity monitoring system would be revised to specify that the records for the monitored opacity of the coal boilers must include data for 6-minute, one-hour, and three-hour block averages.

Conditions 7.1.9(d) (i) (A) and 7.1.9(e) (i) (A)

The condition would be revised to include applicable units for emission data (lb/mmBtu) and other wording or phrasing changes for consistency.

Condition 7.1.10-2(a) (i)

The condition would be revised to clarify that "each" affected boiler was subject to the specified semi-annual reporting requirements.

Condition 7.1.10-2(a) (i) (B)

This condition would be revised to specify that the Permittee must provide the greatest "hourly" load achieved by each affected boiler in the semi-annual report. Condition did not previously include the word "hourly."

Condition 7.1.10-2(a) (i) (D)

The word "maintained" would be added after "records" for clarity.

Condition 7.1.10-2(a) (ii)

The condition would be revised to clarify that semi-annual reports must include information specified in Condition 7.1.10-2(b), (c) and (d) for SO₂, NO_x and PM emissions and opacity from the affected boilers during the quarter.

Condition 7.1.10-2(b)

The condition would be updated for clarity and consistency. Changes include using "CEMS" in place of "monitoring system" or "continuous monitoring", replacing "limitation" with "applicable standard" and minor revisions in wording for consistency with comparable conditions in the permit.

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Condition 7.1.10-2(c)

The phrase "...except for zero and span checks..." would be removed for consistency with the cited regulatory requirements in 40 CFR 60.7(c)(4). To improve clarity, the phrase "as specified by 40 CFR 60.7(c)(4)" would be added at end of Condition 7.1.10-2(c)(i) for reporting related to NO_x emissions. In addition, throughout Condition 7.1.10-2(c) references to "affected boiler" would use language indicating the requirements apply to each pair of affected boilers because each pair of boilers share a common stack.

Condition 7.1.10-2(d)(i) and (ii)

Conditions 7.1.10-2(d)(i) and (ii) would also be revised to accurately cite regulatory requirements from 40 CFR 60.7(c)(4) and (d).

Condition 7.1.10-2(e)

The condition would be revised to more closely follow the regulatory language in 35 IAC 217 Subpart V.

Condition 7.1.11(b) and (c)

References to wood and process wastes and to boiler cleaning residue would be removed from the condition as discussed previously. The word "firing" would be replaced with "burning" for consistency, and revisions to wording or phrasing would be made to improve clarity.

In Condition 7.1.11(c)(ii), the statement concerning the use of alternate fuel would be revised to reflect the relevant criteria specified in 40 CFR 241.

Condition 7.1.12(a)(i)

A reference to opacity would be changed to Condition 5.2.2(b) for clarity and consistency. Cross reference to recordkeeping condition would also be revised for consistency with language in CAAPP permits for other coal-fired power plants.

Condition 7.1.12(a)(ii)

Instead of referencing an "above" condition, the actual condition i.e. Condition 7.1.12(a)(i) would be referenced.

Condition 7.1.12(b) through (f)

The conditions would be revised for clarity and consistency with language used in CAAPP permits issued to other coal-fired power plants.

Changes in Sections 7.2 and 7.3: Unit Specific Conditions for Coal Handling and Processing Equipment

Conditions 7.2.1 and 7.3.1

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A note would be added to clarify that the description is for informational purposes only.

Condition 7.2.2

The list of emission units would be revised to clearly specify the coal handling emissions units that are "affected operations" under Section 7.2 of the permit. No coal handling emission units were added or modified since the permit was issued in 2005. The source no longer receives coal by barge so these emissions units would be removed from the permit.

Condition 7.3.2

The list of emission units and associated pollution control equipment would be revised to more clearly identify the control equipment and control measures associated with coal crushing. No coal processing emission units were added, removed or modified since the permit was issued in 2005.

Conditions 7.2.3(a) and 7.3.3(a)

This condition would be revised for additional clarity and consistency with CAAPP permits issued to other coal-fired power plants in Illinois. A cross-reference in Condition 7.2.3 would also be corrected to Condition 7.2.2.

Conditions 7.2.4(a) and (b) and 7.3.4(a) and (b)

These conditions would be revised for improved clarity by cross-referencing Source-Wide Conditions 5.2.2(a) and (b) for the applicable fugitive emission and opacity standards.

Condition 7.2.5(b) and 7.3.5(b)

Non-applicability statements to NSPS, "Standards of Performance for Coal Preparation and Processing Plants," 40 CFR 60 Subpart Y, would be added to the permit because the affected operations and processes for coal handling and processing have not been constructed, re-constructed or modified after the dates specified in the rule (i.e., October 24, 1974 or May 27, 2009).

Condition 7.2.9(a) and 7.3.9(a)

The requirements in these conditions in the initial permit to keep records for the performance specifications of dust collection equipment would be removed.

In the initial permit, these records were required for the "dust collection equipment" associated with these units. Joppa does not use baghouses or any other type of dust collection equipment which these records must be kept for coal handling or coal processing. Therefore, Conditions 7.2.9(a)(i) and 7.3.9(a)(i)(A) in the initial permit would be removed from the permit. As a result, Conditions 7.2.9(ii) and 7.3.9(a)(i)(B) in the initial permit would become Conditions 7.2.9(a)(i) and 7.3.9(a)(i).

Conditions 7.2.9(a)(ii) and 7.3.9(a)(ii) would be added or revised/renumbered to require the source to keep maintenance and repair logs for the air pollution control equipment associated with these material handling and processing units.

These conditions would also be revised for consistency with CAAPP permits issued to other coal plants in Illinois.

Conditions 7.2.9(f) and 7.3.9(e)

The phrase "opacity measurement" would be replaced with "opacity observations" throughout these conditions to improve clarity. The condition would also be revised to include records for the reason for these observations as these observations must now be conducted more frequently and for various reasons. This was necessary since observations for visible emissions would now be provided for by Conditions 7.2.8(b) and 7.3.8(b).

Condition 7.2.9(g)

This condition would be revised to clarify that records required by Conditions 7.2.9(b)(ii) and 7.2.9(c) are to be used for actual emission determinations.

Conditions 7.2.11(d) and 7.3.11(d)

These conditions would be revised to correctly refer to visible emissions rather than PM emissions

Conditions 7.2.12 and 7.3.12

The conditions would be revised to correct language and cross-references as a result of other changes made to the permit as previously addressed.

Changes in Section 7.4: Gasoline Storage Tank

The title of Section 7.4 would be revised for added clarity and consistency with other CAAPP permits with gasoline storage tanks.

Condition 7.4.1

The description of the gasoline storage tank would be revised for added clarity, and a note stating that the description is for information purposes only and implies no limits or constraints would be added.

Condition 7.4.2

The list of emission units would be revised to include submerged loading pipe in the description and removal from the control equipment column of the table since it is considered a passive control device. The title of the condition would also be revised for clarity and consistency.

Condition 7.4.3

The condition would be revised to clarify that the affected unit is an affected storage tank.

Condition 7.4.4

The condition would be revised to remove the reference to alternative compliance options and instead list the citation which details the different compliance options.

Condition 7.4.5(a) through (c)

Non-applicability statements would be revised for clarity and consistency with wording with other non-applicability statements within this CAAPP permit.

Condition 7.4.6

The title would be revised because there are only operational limits in Condition 7.4.6. The condition would also be re-phrased for added clarity.

Condition 7.4.9(b)

The condition would be re-phrased for added clarity. The phrase "at a minimum" would be removed because appropriate recordkeeping requirements were specifically identified in the condition.

Condition 7.4.10

The condition would be revised to clarify that the Permittee must notify the Illinois EPA of any deviations of Conditions 7.4.4 or 7.4.6 requirements.

Condition 7.4.11

The condition would be revised for added clarity and to remove unnecessary language.

Condition 7.4.12

Compliance procedures would be revised for clarity and consistency with language used in other compliance procedure conditions within this permit.

Changes in Section 8.0: General Permit Conditions

Condition 8.6.3(f)

As a result of public comments made to CAAPP permits for other coal-fired power plants, the Conditions would be revised to clarify the intent.

Changes in Section 9.0: Standard Permit Conditions

Condition 9.7

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Information regarding submittal of the annual emissions report would be corrected.

Condition 9.8

The requirement to submit annual compliance certifications to USEPA would be removed since they are no longer required by USEPA.

Attachment 2 - Other Changes by Administrative Amendment

Introduction

Pursuant to Section 39.5(13) of the Act, these changes would all be administrative changes to the permit.⁸⁶ Pursuant to Section 39.5(13)(a) of the Act, neither notice nor an opportunity for public and affected state comment is required for the Illinois EPA to make these changes to the permit, provided that these revisions are designated as having been made pursuant to the CAAPP's procedures for administrative amendments to CAAPP permits. The source may also implement the changes addressed in its request for an administrative amendment of the permit immediately upon submittal of the request. These changes are not covered by any permit shield pursuant to Section 39.5(7)(j) of the Act.

Formatting Changes throughout the Permit:

Headers would be added at the top of the pages in the permit to identify the sections of the permit. This change will be made to facilitate navigation through the permit. The footers in the permit would now identify the Joppa Station, along with its ID number and the number of the permit. This change would reduce confusion with the CAAPP permits for other sources.

Deleted or Blank Conditions:

Several obsolete conditions would be removed from the permit. In addition, several conditions that do not actually contain any substantive language and now indicate "none" would also be removed. Where removal of a condition would not require renumbering of subsequent conditions, the condition would simply be removed. If removal of such a condition would require renumbering of subsequent conditions and possible updates to cross-references in the permit, the text in the condition would be changed to "Intentionally Blank."

⁸⁶ Section 39.5(13) of the Act defines "administrative permit amendments" as a permit revision that can accomplish one or more of the changes listed in Section 39.5(13)(c) of the Act. All the planned administrative changes to the CAAPP permit for this source fall into the following categories: Correct typographical errors; identify a change in the name, address, or phone number of any person identified in the permit, or provide a similar minor administrative change at the source; or any other type of change which has been determined to be similar to those above.

Word Changes throughout the Permit:

Numerous replacements of the word "log" or "logs" with "record" or "records" would be made throughout the permit for improved clarity and to be consistent with changes made to permits for other coal-fired power plants. These changes will not be discussed individually in the Statement of Basis.

Any condition which refers to use of a USEPA Test Method would be changed to Reference Method for consistency throughout the permit.

The words "testing" and "measurement" would be changed to "observations" in any provision involving or related to the use of Reference Method 9 (Visual Determination of the Opacity of Emissions from Stationary Sources).

Conditions using the phrase "within [period of time] of" or a similar variation would be changed to "not later than [period of time] after" throughout the permit.

Changes in Section 1 of the Permit: Introduction

Conditions 1.1, 1.2 and 1.3

The source identification would be changed from "Electric Energy, Inc." to the "Joppa Power Station" to reflect current terminology used by the Permittee. Owner and Operator information would be updated to reflect the current address and contact information for the Permittee

Changes in Section 3: Conditions for Insignificant Activities

Section 3.0 - Title

The title of this section would be updated for consistency with the Table of Contents for the permit.

Changes in Section 7.1: Unit Specific Conditions for the Coal-Fired Boiler

Condition 7.1.2 - Title

The title would be updated for clarity and consistency with CAAPP permits issued to other coal-fired power plants in Illinois.

Conditions 7.1.3(b) and (c)

The citation for the startup authorization would be corrected to 35 IAC 201.261.

Condition 7.1.4(a)

The word "the" would be added to the second sentence before "affected boiler" to correct grammar.

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Condition 7.1.5

The word "Possible" would be removed from the title for consistency.

Condition 7.1.7(b) (ii)

The word "be" would be added to correct a grammatical error. Also the asterisk after "affected boilers" would be removed and the associated language, with minor revisions, would now be included in this condition.

Condition 7.1.8(a)

A citation to Section 39.5(7) (d) (iii) of the Act would be corrected.

Condition 7.1.9(a) (i) (A)

This condition would be revised to clarify the requirement applies to each affected boiler.

Condition 7.1.10-2(b)

The word "Excess" would be removed from the title for consistency.

Condition 7.1.10-2(d)

"Particulate Matter" in the title would be changed to "PM" for consistency.

Condition 7.1.11

The title would be revised for clarification and consistency with CAAPP permits issued to other coal-fired power plants.

Changes in Sections 7.2 and 7.3: Coal Handling and Processing Equipment

Section 7.2 and 7.3 - Title

The title of these sections would be revised for consistency with CAAPP permits issued to other coal-fired power plants in Illinois.

Conditions 7.2.1 and 7.3.1

These conditions would be revised for additional clarification of the emission units and pollution controls utilized for handling and processing of coal.

Conditions 7.2.2 and 7.3.2

The title of these conditions would be revised for consistency with CAAPP permits issued to other coal-fired power plants in Illinois.

Conditions 7.2.5 and 7.3.5 - Title

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The word "Possible" would be removed from the title for consistency with CAAPP permits issued to other coal-fired power plants in Illinois.

Condition 7.2.6 - Title

The title would remove the words "Operational and Production Limits" since there are no such limits within this section of the permit.

Condition 7.2.7 and 7.3.7 - Title

The title would be changed to "Opacity Observations Requirements" for clarity and consistency with other changes made in these sections of the permit.

Condition 7.3.6

The title would remove the words "operational and production limits, and emission limitations" since there are no such limits in the condition.

Changes in Section 8.0: General Permit Conditions

Condition 8.2

A reference to Section 6.3 would be corrected to reference Section 6.2 and a clarification that Section 6.2 is referring to Section 6.2 of the CAAPP permit would also be made.

Condition 8.6.4

Addresses for the Illinois EPA would be updated.

Changes in Section 9.0: Standard Permit Conditions

Condition 9.4

Addresses for the Illinois EPA would be updated.

Changes in Section 10.0: Attachments

Attachments 1 and 2

Minor changes would be made to conform to the regulatory language in 35 IAC 212.321 and 322.

Attachment 4

Minor changes would be made for clarity and consistency throughout this attachment.

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Attachment 5

The revised Acid Rain Program permit would be included as Attachment 5 of the CAAPP permit. The Acid Rain Program permit was revised in a separate permitting action and is incorporated by reference as stated in the CAAPP permit cover letter.